

MICROCOPY RESOLUTION TEST CHART
NATIONAL RUBERQUIST STANDARDS 1964 A



**REPORT NO. NADC-84068-60** 



# A GENERALIZED ESCAPE SYSTEM SIMULATION (GESS) COMPUTER PROGRAM: GESS PROGRAMMER'S MANUAL VERSION II — VOLUME II

**D-A148 363** 

Louis A. D'Aulerio
Aircraft and Crew Systems Technology Directorate (Code 6032)
NAVAL AIR DEVELOPMENT CENTER
Warminster, PA 18974

and

David A. Fender KETRON, INC. 444 Jacksonville Road Warminster, PA 18974

**APRIL 1984** 

SELECTE DEC 6 1984

FINAL REPORT
AIRTASK NO. A5315312-001D-1531W1100
Work Unit No. WC530
Contract No. N62269-81-C-0206

Approved for Public Release; Distribution is Unlimited

DTE FILE CO.

Prepared for NAVAL AIR SYSTEMS COMMAND (AIR-5312) Department of the Navy Washington, DC 20361

84 11 07 031

#### **NOTICES**

REPORT NUMBERING SYSTEM — The numbering of technical project reports issued by the Naval Air Development Center is arranged for specific identification purposes. Each number consists of the Center acronym, the calendar year in which the number was assigned, the sequence number of the report within the specific calendar year, and the official 2-digit correspondence code of the Command Office or the Functional Directorate responsible for the report. For example: Report No. NADC-78015-20 indicates the fifteenth Center report for the year 1978, and prepared by the Systems Directorate. The numerical codes are as follows:

CODE	OFFICE OR DIRECTORATE
00	Commander, Naval Air Development Center
01	Technical Director, Naval Air Development Center
02	Comptroller
10	Directorate Command Projects
20	Systems Directorate
30	Sensors & Avionics Technology Directorate
40	Communication & Navigation Technology Directorate
50	Software Computer Directorate
60	Aircraft & Crew Systems Technology Directorate
70	Planning Assessment Resources
80	Engineering Support Group

PRODUCT ENDORSEMENT - The discussion or instructions concerning commercial products herein do not constitute an endorsement by the Government nor do they convey or imply the license or right to use such products.

lande DATE: 13 deptember 1994

SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered)

	ENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER		NO. 3. RECIPIENT'S CATALOG NUMBER
NADC-84068-60	110-A148	B63
4. TITLE (and Subtitle)	<del></del>	5. TYPE OF REPORT & PERIOD COVERED
A GENERALIZED ESCAPE SYST		FINAL REPORT
COMPUTER PROGRAM: GESS PR	ROGRAMMER'S MANUAL	FINAL REPORT
VERSION II - VOI	UME II	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(e)		8. CONTRACT OR GRANT NUMBER(8)
Louis A. D'Aulerio		N62269-81-J-0206
David A. Fender		Task No. 630-1944
9. PERFORMING ORGANIZATION NAME	E AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
		AIRTASK NO.
See Reverse		A5315312-001D-1531W1100
		Work Unit No. WC530
11. CONTROLLING OFFICE NAME AND		12. REPORT DATE
NAVAL AIR SYSTEMS COMMAND	(AIR-5312)	APRIL 1984
Qepartment of the Navy		13. NUMBER OF PAGES
Washington, DC 20361		351
14. MONITORING AGENCY NAME & ADE		) 15. SECURITY CLASS. (of this report)
Aircraft and Crew Systems (Code 6032)		UNCLASSIFIED
Naval Air Development Cen	ter	15e. DECLASSIFICATION/DOWNGRADING
Warminster, PA 18974		SCHEDUCE
17. DISTRIBUTION STATEMENT (of the	abetract entered in Block 20, If dillerent	tram Report)
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse sid	e if necessary and identify by block numb	or)
Coordinate Systems	Parachute	Runge-Kutta
Equations of Motion	Rails	DART
Forces and Moments	Stabilization	DRI
Catapult	Aerodynamic Drag	Dynamic CG
lockets	Drogue Slug/Container	
20. ABSTRACT (Continue on reverse side		
The Generalized Escape Sy	stem Simulation (GESS)	program is a computerized
mathematical model for	dynamically simulating th	he performance of existing or
developmental aircraft	ejection seat systems.	The program generates
six-dimensional traject	ory predictions of the	he aircraft, seat/occupant,
occupant alone, and seat alone by calculating the forces and moments imposed on these elements by the seat catapults, rails, rockets, stabilization, and		
recovery systems included	in most escape system co	onfigurations. User options
DD FORM 1473 EDITION OF 1 N		

#### UNCLASSIFIED

#### SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered)

#### 9. Continued

Louis A. D'Aulerio Aircraft and Crew Systems Technology Directorate (Code 6032) Naval Air Development Center Warminster, PA 18974

David A. Fender Ketron, Inc. 444 Jacksonville Road Warminster, PA 18974

#### 20. Continued

are provided to simulate the performance of all conventional escape system designs under most environmental conditions and aircraft attitudes or trajectories. This GESS Programmer's Manual summarizes program conventions, lists the annotated FORTRAN IV program code, and represents the second of two volumes of GESS documentation. Volume I, the GESS User's Guide, describes the elements occurring in typical escape systems, the theory and formulation of the simulation model, and the procedures necessary to successfully prepare, execute and use this and the related ACT and DRAS programs.

UNCLASSIFIED

#### FOREWORD

This final report represents the second of two volumes of documentation for the Generalized Escape System Simulation (GESS) computer program. This GESS Programmer's Manual summarizes program conventions, lists the annotated FORTRAN IV program code and describes the procedures necessary to successfully use the GESS computer program. Volume I, the GESS User's Guide, describes the elements present and events occurring in typical escape systems, the theory and formulation of the simulation model, and the procedures for preparing and executing the GESS program and the related ACT and DRAS programs. A portion of this work was performed by Ketron, Inc., in accordance with NADC Contract N62269-81-C-0206, Task No. 630-1944.

This work was sponsored by the Naval Air Systems Command (AIR-5312) under Airtask No. A5315312-001D-1531W1100, Work Unit No. WC530.

	Accession For
	NTIS TWO
DTIC	DTIC Test
ELECTE	Justine
DEC 6 1984	By
B _ (*)	AVEOU BASTER
	A-I

#### **ABSTRACT**

The Generalized Escape System Simulation (GESS) program is a computerized mathematical model for dynamically simulating the performance of existing or developmental aircraft ejection seat systems. The program generates six-dimensional trajectory predictions of the aircraft, seat/occupant, occupant alone, and seat alone by calculating the forces and moments imposed on these elements by the seat catapults, rails, rockets, stabilization, and recovery systems included in most escape system configurations. User options are provided to simulate the performance of all conventional escape system designs under most environmental conditions and aircraft attitudes or trajectories. This GESS Programmer's Manual, summarizes program conventions, lists the annotated FORTRAN IV program code, and represents the second of two volumes of GESS documentation. Volume I, the GESS User's Guide, describes the elements present and events occurring in typical escape systems, the theory and formulation of the simulation model, and the procedures necessary to successfully prepare, execute, and utilize this and the related ACT and DRAS programs.

# TABLE OF CONTENTS

SECTION	TITLE	PAGE
	FOREWORD	i
	ABSTRACT	ii
	TABLE OF CONTENTS	111
	LIST OF FIGURES	vi
	LIST OF TABLES	vi
1.0	INTRODUCTION	1-1
2.0	PROGRAM CONVENTIONS	2-1
2.1	Coordinate Systems	2-1
2.2	Variable Identification	2-4
2.3	Integration Arrays	2-5
2.3.1	Aircraft Trajectory Array	2-7
2.3.2	Occupant Alone Trajectory Array	2-8
2.3.3	Seat Alone Trajectory Array	2-9
2.3.4	Seat/Occupant Trajectory Array	2-10
2.3.5	Parachute Trajectory Array	2-11
2.3.6	Thrust Vector Control Array	2-12
2.3.7	Quaternion Arrays	2-13
3.0	AERODYNAMIC COEFFICIENT TABLES	3-1
4.0	EXECUTION JOB STREAM	4-1
5.0	GENERALIZED ESCAPE SYSTEM SIMULATION (GESS)	
	PROGRAM ANNOTATED CODE LISTINGS	5-1
	Program GESS	5-2
	Subroutine ACSEP	5-11
	Subroutine AERFMOA	5-13
	Subroutine AERFMSA	5-17
	Subroutine AERFMSO	5-23
	Subroutine AEROIN	5-29
	Subroutine AIRCRAFT	5-31 5-34
	Subroutine ATMOS	5-34 5-36
	Subroutine CATAFMSubroutine CHUINIT	5-40
	Subroutine CHUTES	5-40
	Subroutine CHUTFM	5-44
	Subroutine CLEAR	5-49

# TABLE OF CONTENTS - (Cont'd)

SECTION	TITLE		PAGE
	Subroutine	DARTFM	5-60
		DRICALC	5-64
		DROGUE1	5-67
		DROGUE2	5-71
		DYNAMCG	5-76
		EVENT	5-81
		HEADER	5-85
		IDIRMTX	5-88
		INIQUA	5-89
		INITMS	5-91
		INITRAJ	5-94
		INIVECT	5-98
		INIVRBL	5-104
		INPUT	5-113
		INTEG	5-134
		INTEGII	5-136
		INTEGIN	5-137
		INTEGMD	5-14(
		INTEGSI	5-14
		INTLZ	5-142
		INTRP	5-143
		LADDATE	5-146
		MATRIX	5-14
		MATUPD	5-149
		OCCALON	5-150
		PCHUTFT	5-154
		PLOTBIN.	5-159
		PLOTWAC	5-169
		QUAT	5-171
		RAILFM	5-173
		RECOV	5-178
		REINTEG.	5-183
		REINZRO	5-184
		REPORTS	5-185
		REPRTL	5-188
		REPRT2	5-207
		REPRT3	5-209
		REPRT4.	5-211
		REPRTS	5-213
		REPRT6	5-219
	Subroutine	REPRT7	5-217
		REPRT8	5-219
	Subroutine	REPRT9	5-222
		REPRT10	5-224
		REPRT11	5-226
	Subroutine	REPRT12	5-229
	Subroutine	REPRT13	5-232
	Subroutine	REPRT19	5-234
	Subsoutine		5-234

# TABLE OF CONTENTS - (Cont'd)

Subroutine REPRT21Subroutine REPRT22
Subroutine REPRT23
Subroutine REPRT24
Subroutine REPRT25
Subroutine REPRT26
Subroutine REPRT27
Subroutine REPRT28
Subroutine REPRT29
Subroutine REPRT30
Subroutine REPRT31
Subroutine REPTDRI
Subroutine RESTART
Subroutine RKTFM
Subroutine ROTATE
Subroutine RUNGE
Subroutine SEATAKB
Subroutine SEATOCC
Subroutine SEPINIT
Subroutine SLUGCON
Subroutine THRUST
Subroutine TMUPDAT
Subroutine TUBEND
Subroutine UPDVECT
Subroutine VERTSK
Function ZARCTAN
Subroutine ZLININT
REFERENCES
APPENDICES

# LIST OF FIGURES

FIGURE	11116	PAGE
2-1	Coordinate Systems	2-2
4-1	GESS Execution Job Stream for CDC KRONOS/OS	4-3
	LIST OF TABLES	
TABLE	TITLE	PAGE
2-1	Integration Array Values	2-6
2-2	Aircraft Trajectory Array Description	2-7
2-3	Occupant Alone Trajectory Array Description.	2-8
2-4	Seat Alone Trajectory Array Description	2-9
2-5	Seat/Occupant Trajectory Array Description	2-10
2-6	Parachute Trajectory Array Description	2-11
2-7	Thrust Vector Control Array Description	2-12
2_8	Oustownian Armay Daggetations	2_12

#### 1.0 INTRODUCTION

Designing ejection seat systems enabling the safe escape of crewmembers from high-speed military aircraft is a formidable task. As an adjunct to the Navy's on-going escape systems program of system engineering, testing, and incident review, a mathematical model has been formulated and developed to simulate the operation of any ejection seat-based escape system under most realistic conditions from any aircraft. This Programmer's Guide lists the annotated code of the Generalized Escape System Simulation (GESS) program, and is Volume II of two volumes of GESS documentation. A complete description of the history, theory, preparation, and use of GESS is provided in Volume I, the GESS User's Guide.

(THIS PAGE INTENTIONALLY LEFT BLANK)

#### 2.0 CONVENTIONS

# 2.1 Coordinate Systems

Trajectories generated by the Generalized Escape System Simulation (GESS) program are calculated with respect to specific, "right hand rule," coordinate systems coinciding with center of gravities or other specified reference points of the various system elements. Each of the program coordinate systems is defined by six (6) degrees of freedom:

#### A. Linear:

- X forward positive displacement
- 2. Y left positive displacement
- 3. Z upward positive displacement

#### B. Angular:

- 4. Yaw (R) leftward positive rotation
- 5. Pitch (Q)- nose downward positive rotation
- 6. Roll (P) right wing downward positive rotation

These coordinate systems, illustrated in Figure 2-1, are defined as follows:

#### • Earth-Fixed Coordinate System (EFCS)

The EFCS is a 3-axis orthogonal coordinate system with origin at a fixed point located on or near the surface of the earth. Since all simulated distances are relatively small compared to the earth's radius, the errors associated with neglecting the curvature of the earth's surface are considered negligible. The movements and rotations of all simulated system elements can be described with respect to (wrt) this fixed coordinate system.

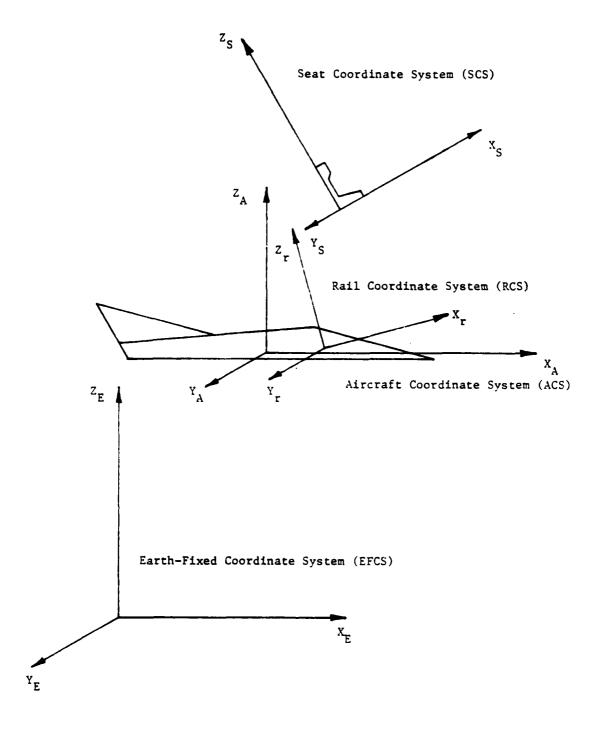


Figure 2-1. Coordinate Systems

# • Aircraft Coordinate System (ACS)

The ACS is a 3-axis orthogonal coordinate system with origin at a fixed point, usually the aircraft's center of gravity. All linear and angular movements of the aircraft are determined by establishing the position of this coordinate system wrt the EFCS. The position of all other system elements, prior to and, optionally, after the separation of the seat from the aircraft, is determined wrt to the ACS.

# • Rail Coordinate System (RCS)

The RCS is a 3-axis orthogonal coordinate system which is defined and fixed wrt the ACS. Its origin coincides with the mid-point between the rails of the lateral (Y) axis defined by the two lowest rail points in the ACS, and its vertical (Z) axis is parallel to the rails. The rail system serves to restrict the motion of the seat to a specific path as it moves out of the aircraft cockpit.

#### • Seat Coordinate System (SCS)

The SCS is a 3-axis orthogonal coordinate system with origin usually corresponding to the initial location of the RCS origin wrt the seat. The center of gravity (OC) of either the seat/occupant (S/0) combination or the seat/alone (S/A) is referenced wrt the SCS, allowing the trajectories of these system elements to be tracked wrt either the ACS or the EFCS. Points of application of the various forces acting on the S/0 or S/A are also referenced wrt the SCS, allowing the calculation of moments and rotation around the respective CCs.

# Occupant Alone Coordinate System (OACS)

The OACS is a 3-axis orthogonal coordinate system with origin at the center of gravity of the seat occupant after the occupant separates from the seat. The OACS is currently defined only by the three linear degrees of freedom because the disjointed non-rigidity of the occupant alone makes any angular determination difficult, if not irrelevant. Provisions have been made for the future incorporation of OACS angular degrees of freedom if such information is necessary at a later date.

#### • Thrust Vector Control Coordinate System (TVCCS)

The TVCCS is a 3-axis orthogonal coordinate system with origin at the common intersection of the rocket line of thrust and the centerlines of its gimbals. This coordinate system establishes the orientation of the rocket line of thrust, which is modified dynamically as part of the vertical-seeking maneuver.

Coordinate systems and vector directions should be carefully considered when preparing simulation inputs. All output reports are referenced accordingly.

# 2.2 Variable Identification

Several variable naming conventions are used to identify variables used in the program. Refer to the program annotation for specific variable descriptions. These naming conventions are summarized below.

SA - seat alone

OA - occupant alone

SO - seat/occupant

NPTS - number of points

RK - rocket

WGHT - weight

X - X axis

Y - Yaxis

Z - Z axis

P - roll rotation

Q - pitch rotation

R - yaw rotation

VEL - velocity

PORO - porosity

REC - recovery parachute

DRO/DR - drogue parachute

DRT - DART

POS - position

IGN - ignition

CAT - catapult

TVC - thrust vector control

CG - center of gravity

The variable names used in the program have been selected to facilitate the programmer's understanding. There is limited correlation between these variable names and the variable names used in the program formulation.

# 2.3 Integration Arrays

The large number of equations and saved values associated with many of the trajectory integrations in GESS resulted in the development of a highly structured integration array logic. This logic maintains the current value of each integration equation, in addition to all intermediate or previous equation values for both the Runge-Kutta and predictor-corrector methods.

Thus, the initial four time steps can be integrated by the Runge-Kutta routine, and subsequent integrations performed by the predictor-corrector routine.

The first value of each array indicates the number of equations involved in the integration. The remaining array values are then ordered, in accordance with the number of equations, as described in Table 2-1.

Table 2-1. Integration Array Values

Array Location	Description
1	number of equations (N)
2 (1+N)	results of integrations - equation values
(2+N) (1+2N)	equation derivatives
(2+2N) (1+3N)	current Runge-Kutta K-values
(2+3N) $(1+4N)$	intermediate Runge-Kutta K-value summations
(2+4N) (1+5N)	intermediate equation values
(2+5N) (1+6N)	equation values at (time-At)
(2+6N) - (1+7N)	equation values at (time- $2\Delta t$ )
(2+7N) (1+8N)	equation values at (time-3 $\Delta$ t)
(2+8N) (1+9N)	equation values at (time- $4\Delta t$ )
(2+9N)(1+10N)	equation derivatives at (time-∆t)
(2+10N)(1+11N)	equation derivatives at (time- $2\Delta t$ )
(2+11N)(1+12N)	equation derivatives at (time-3 $\Delta$ t)
(2+12N)(1+13N)	predictor values at currect time
(2+13N)(1+14N)	predictor values at (time+∆t)
(2+14N)(1+15N)	corrector values at current time
(2+15N)(1+16N)	corrector values at (time+At)

2.3.1 <u>Aircraft Trajectory Array.</u> The aircraft trajectory array, TRAJAC, is based upon the 12 primary trajectory variables described in Table 2-2.

Table 2-2. Aircraft Trajectory Array Description

Array Location	Description
TRAJAC(1)	<pre>number of aircraft trajectory equations = 12 if tracking aircraft = 0 otherwise</pre>
TRAJAC(2)	x position of aircraft in EFCS
TRAJAC(3)	y position of aircraft in EFCS
TRAJAC(4)	z position of aircraft in EFCS
TRAJAC(5)	x velocity of aircraft in ACS
TRAJAC(6)	y velocity of aircraft in ACS
TRAJAC(7)	z velocity of aircraft in ACS
TRAJAC(8)	p (roll) angular position of aircraft †
TRAJAC(9)	q (pitch) angular positon of aircraft †
TRAJAC(10)	r (yaw) angular position of aircraft †
TRAJAC(11)	p (roll) angular velocity of aircraft in ACS
TRAJAC(12)	q (pitch) angular velocity of aircraft in ACS
TRAJAC(13)	r (yaw) angular velocity of aircraft in ACS
TRAJAC(14) through TRAJAC(193)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with N=12.

<sup>† -</sup> integration result; not used for describing angular position.

2.3.2 Occupant Alone Trajectory Array. The occupant alone trajectory array, TRAJOA, is based upon the 12 primary trajectory variables described in Table 2-3.

Table 2-3. Occupant Alone Trajectory Array Description

Array Location	Description
TRAJOA(1)	number of occupant alone trajectory equations = 0 before S/0 separation = 12 after S/0 separation
TRAJOA(2)	x position of occupant alone in EFCS
TRAJOA(3)	y position of occupant alone in EFCS
TRAJOA(4)	z position of occupant alone in EFCS
TRAJOA(5)	x velocity of occupant alone in ACS
TRAJOA(6)	y velocity of occupant alone in ACS
TRAJOA(7)	z velocity of occupant alone in ACS
TRAJOA(8)*	p (roll) angular position of occupant alone
TRAJOA(9)*	q (pitch) angular positon of occupant alone
TRAJOA(10)*	r (yaw) angular position of occupant alone
TRAJOA(11)*	p (roll) velocity of occupant alone in OACS
TRAJOA(12)*	q (pitch) velocity of occupant alone in OACS
TRAJOA(13)*	r (yaw) velocity of occupant alone in OACS
TRAJOA(14) through TRAJOA(193)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with N=12.

<sup>\* -</sup> All angular positions and velocities and their derivatives are currently permanently set = 0; array space has been maintained to facilitate future incorporation of O/A angular tracking.

2.3.3 <u>Seat Alone Trajectory Array.</u> The seat alone trajectory array, TRAJSA, is based upon the 12 primary trajectory variables described in Table 2-4.

Table 2-4. Seat Alone Trajectory Array Description

Array Location	Description
TRAJSA(1)	number of seat alone trajectory equations  = 0 before S/0 separation  = 12 after S/0 separation
TRAJSA(2)	x position of seat alone in EFCS
TRAJSA(3)	y position of seat alone in EFCS
TRAJSA(4)	z position of seat alone in EFCS
TRAJSA(5)	x velocity of seat alone in SCS
TRAJSA(6)	y velocity of seat alone in SCS
TRAJSA(7)	z velocity of seat alone in SCS
TRAJSA(8)	p (roll) angular position of seat alone †
TRAJSA(9)	q (pitch) angular positon of seat alone †
TRAJSA(10)	r (yaw) angular position of seat alone †
TRAJSA(11)	p (roll) angular velocity of seat alone in SCS
TRAJSA(12)	q (pitch) angular velocity of seat alone in SCS
TRAJSA(13)	r (yaw) angular velocity of seat alone in SCS
TRAJSA(14) through TRAJSA(193)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with $N=12$ .

<sup>† -</sup> integration result, not used for describing angular position.

2.3.4 <u>Seat/Occupant Trajectory Array</u>. The seat/occupant trajectory array, TRAJSO, is based upon the 12 primary trajectory variables described in Table 2-5.

Table 2-5. Seat/Occupant Trajectory Array Description

Array Location	<u>Description</u>
TRAJSO(1)	<pre>number of seat/occupant trajectory equations = 12 before S/O separaton = 0 after S/O separation</pre>
TRAJSO(2)	x position of seat/occupant in EFCS
TRAJSO(3)	y position of seat/occupant in EFCS
TRAJSO(4)	z position of seat/occupant in EFCS
TRAJSO(5)	x velocity of seat/occupant in SCS
TRAJSO(6)	y velocity of seat/occupant in SCS
TRAJSO(7)	z velocity of seat/occupant in SCS
TRAJSO(8)	p (roll) angular position of seat/occupant †
TRAJSO(9)	q (pitch) angular positon of seat/occupant †
TRAJSO(10)	r (yaw) angular position of seat/occupant †
TRAJSO(11)	p (roll) angular velocity of seat/occupant in SCS
TRAJSO(12)	q (pitch) angular velocity of seat/occupant in SCS
TRAJSO(13)	r (yaw) angular velocity of seat/occupant in SCS
TRAJSO(14) through TRAJSO(193)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with $N=12$ .

 $<sup>\</sup>dagger$  = integration result, not used for describing angular position.

2.3.5 <u>Parachute Trajectory Array</u>. The parachute array, TRAJCH, is based upon 6 primary trajectory variables for each of the 3 parachutes incorporated into the GESS model, as described in Table 2-6.

Table 2-6. Parachute Trajectory Array Description

Array Location	Description
TRAJCH(1,1*)	number of parachute i* trajectory equations = 6 when applicable = 0 otherwise
TRAJCH(2,i*)	x position of parachute i* in EFCS
TRAJCH(3,i*)	y position of parachute i* in EFCS
TRAJCH(4,i*)	z position of parachute i* in EFCS
TRAJCH(5,i*)	x velocity of parachute i* in EFCS
TRAJCH(6,i*)	y velocity of parachute i* in EFCS
TRAJCH(7,i*)	z velocity of parachute i* in EFCS
TRAJCH(8,i*) through TRAJCH(97,i*)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with N = $6$ .

<sup>\* -</sup> i = 1 for first drogue parachute or slug/container

<sup>= 2</sup> for second drogue parachute

<sup>= 3</sup> for recovery parachute

2.3.6 Thrust Vector Control Array. The thrust vector control array,
TVCEQS, is based upon the 14 primary control variables described in Table 2-7.

Table 2-7. Thrust Vector Control Array Description

Array Location	Description
TVCEQS(1)	number of thrust vector control (TVC) equations = 14 during TVC = 0 otherwise
TVCEQS(2)	x1*
TVCEQS(3)	×2*
TVCEQS(4)	x3*
TVCEQS(5)	×4*
TVCEQS(6)	x5*
TVCEQS(7)	x6*
TVCEQS(8)	x7*
TVCEQS(9)	x8*
TVCEQS(10)	x9*
TVCEQS(11)	×10*
TVCEQS(12)	x <sub>11</sub> *
TVCEQS(13)	x <sub>12</sub> *
TVCEQS(14)	x <sub>13</sub> *
TVCEQS(15)	x <sub>14</sub> *
TVCEQS(16) through TVCEQS(255)	derivatives and other equation values associated with the above equations as detailed in Table 2-1 and with $N=14$ .

<sup>\* -</sup> for details see User's Manual, Section 3.5.3, and Subroutine VERTSK, page 5-303. Note that  $x_i$  = TVCVALS(i) and  $x_i$  = TVCDERV(i).

2.3.7 Quaternion Arrays. The 4 quaternion arrays, QUATAC, QUATOA, QUATSA, and QUATSO, are based upon the 4 primary quaternion array variables described in Table 2-8.

Table 2-8. Quaternion Array Descriptions

Array Location	Description
QUATxx*(1)	<pre>number of xx* quaternion equations = 4 \if xx* trajectory is being tracked = 0 otherwise</pre>
QUATxx*(2)	$\lambda_{0xx}$ (See User's Manual, Eq. 3.a)
QUATxx*(3)	$\lambda_{1xx}$ (See User's Manual, Eq. 3.b)
QUATxx*(4)	$\lambda_{2xx}$ (See User's Manual, Eq. 3.c)
QUATxx*(5)	$\lambda_{3xx}$ (See User's Manual, Eq. 3.d)
QUATxx*(6) through QUATxx*(65)	derivatives and other equations associated with the above equations as detailed in Table $2-1$ and with $N=4$ .

<sup>\* -</sup> xx = AC for aircraft trajectory

<sup>⇒</sup> OA for occupant alone trajectory

<sup>\*</sup> SA for seat alone trajectory

<sup>≈</sup> SO for seat/occupant trajectory

(THIS PAGE INTENTIONALLY LEFT BLANK)

#### 3.0 AERODYNAMIC COEFFICIENT TABLES

During the execution of the GESS program, equally spaced aerodynamic coefficients are required for computing the aerodynamic forces acting upon the seat/occupant system. These coefficients are usually derived through wind tunnel experiments using the subject ejection seat<sup>(1)\*</sup>. The forces and moments data produced by these tests are used as inputs for the Aerodynamic Coefficient Table (ACT) program<sup>(2)</sup>, which creates the necessary coefficient tables as functions of the seat orientation and velocity. The ACT program provides an efficient method for creating, modifying, and storing these aerodynamic coefficient tables on random access files for retrieval by GESS during simulation execution. The ACT program was closely modeled after the RFWTHR program <sup>(3)</sup>.

The annotated code listings of the ACT program are provided in Appendix A. These listings have been extracted from Reference 2 because of the importance of having proper aerodynamic coefficient tables for the successful execution of GESS. Detailed instructions for using the ACT program are given in the Volume I GESS User's Guide.

<sup>\*</sup> All references may be found in Section 6.0.

(THIS PAGE INTENTIONALLY LEFT BLANK)

#### 4.0 EXECUTION JOB STREAM

The GESS program is executed by submitting to the computer a series of operating system commands known as the "job stream". The job stream can be entered line-by-line interactively. However, it is usually more convenient to prepare a job stream, or "submit file", in advance of execution and "batch" submit this file to the computer for execution. The interactive commands to batch submit a job stream are:

GET, filename

SUBMIT, filename

Another print site can be specified if the main computer center printer is not desired.

SUBMIT, filename, EI = print site identifier

If no printed output is desired:

SUBMIT, filename, N

Figure 4-1 presents a recommended job stream for GESS execution using the CDC KRONOS operating system. This job stream provides for:

- . the loading of the prepared input file (GESSI)
- the loading of the ACT program-generated aerodynamic coefficient tables (AERO4)
- the loading and execution of the pre-compiled program binary code
   (GESSB)
- the optional creation or replacement of program-generated plotting data files (GESST and GESSZ)

- the creation of a single, inclusive, indirect access output file containing a mirror copy of the original input file and all requested program-generated reports (GESSO)
- . A "day file" record of the submitted job execution (GESSDAY)
- . An error recovery logic that saves the day file and any prior output, in the eventuality of an execution error

The recommended job stream is intended for execution runs generating a nominal number of output reports and/or simulating a relatively few seconds of simulated trajectory. Should a large number of reports and/or a long simulation period be desired, the output (and, possibly, the plotting files) should be created either as a direct access file, or as several indirect files. Refer to Reference 4 for details on direct file creation on the KRONOS system.

```
/JOB
GESS(CB200000,T75)
ACCOUNT(XXXXXX,YYYYYY)
ASSIGN, MS, OUTPUT
GET(TAPE1=KGESI)
GET(TAPE2=AERO4)
GET(GESSB)
MAP(OFF)
GESSB.
REPLACE(TAPE42=KGEST)
REPLACE(TAPE41=KGESZ)
GOTO, 1.
EXIT.
1, REWIND, *.
SKIPF(DAYFILE)
COPYSBF(TAPE1,OUTPUT)
COPYBF(TAPE5,OUTPUT)
COPYBF(TAPE6,OUTPUT)
COPYBF(TAPE7,OUTPUT)
COPYBF(TAPE 40, OUTPUT)
REWIND, OUTPUT.
REPLACE(OUTPUT=KGESO)
GOTO, 2.
EXIT.
2, DAYFILE, GESSDAY.
REPLACE, GESSDAY.
EXIT.
/EOR
/EOI
```

Figure 4-1. GESS Execution Job Stream for CDC KRONOS/OS

(THIS PAGE INTENTIONALLY LEFT BLANK)

# 5.0 GENERALIZED ESCAPE SYSTEM SIMULATION (GESS) PROGRAM

ANNOTATED CODE LISTINGS

	74/74 OPI=1	FIN 4 6+428	83/11/07: 09:41:53
-	PROGRAM GESS (INPUT, DUTPUT, +TAPE; =257, IAPES =513, IAPES =257, IAPES		
ស	+ IAPE 1 = 257, IAPE 7 = 257, IAPE 8 = 257, IAPE 9 - 257, IAPE 10 = 257, IAPE 20 = 257, IAPE 30	APE 14-257, TAPE 10-257, APE 14-257, TAPE 15-257, APE 19-257, TAPE 20-257, APE 29-257, TAPE 30-257, APE 34-257, TAPE 35-257,	
to t	+1APE36=257, TAPE37=257, TAPE38=257, TAPE39=257, TAPE40=257 +TAPE41, TAPE42)	APE39×257,TAPE40=257,	;
	C VERSION KGESSAB - DATED 7 NOVEMBER 1983  C VERSION FOR THE FOREST CONTRACTOR CONTRACTO	######################################	•
51			
	C GENERALIZED ESCAPE STOTEM SIMULATION C BY C DOINTS A DALIFERTO	NOT WITH TON	
20	K SHIRL	ESE	
	C BRUCE J WALDRON		
,			
10 10	1		
	C OF KEIKUN, INC		
90	OO		
	C DESCRIPTION - LEVEL 1 C DESCRIPTION - CONTROLS THE EXECUTION OF THE PROGRAM	F THE PROGRAM	• • •
35	METHOD -	GESS FIRST OPENS MASS STORAGE AND READS IN AERODYNAMIC COEFFICIENTS. THEN GESS READS THE FIRST	* • •
		COUNTING FOR A START CARD. IT STOP CARD, THE RUN ENDS. IT ER THAN A START CARD. AN ERROR	
40		MESSAGE IS PRINTED AND THE RUN IS ABORTED. IF THE START CARD IS FOUND. GESS CALLS INTLZ WHICH CONTROLS	• •
		PROGRAM INITIALIZATION.  GESS THEN LOOPS THROUGH A SERIES OF CALLS TO 17 MAJOR	• • •
45		_	
		SUBROUTINES  If A TATA E ERROR IS ENCOUNTERED.  HE SUBROUTINE IN WHICH THE ERROR IS FOUND PRINTS A	
50		MESSAGE INDICATING THE PROBLEM AND SETS THE LEKKTLG TO	• •
		CALL, AND 11 FOUND ON, THE ROW IS ABORRED IF THE RUN TERMINATES MORMALLY (THAT IS, AT THE DESTORD TIME ON EVENT) GECK DEARS THE MEYT CADD IN	• • •
ų V		IF A STOP CARD OF BLANK CARD IS TO AMOTHER CARD TOWN	. • •
n n	GESS REINITIALIZ	KECUTES THE NEXT RUN.	•
	C COMMUNICATIONS -		•

65 CONSTANTS  COMMON YORF OF CORPONENTS  COMMON
---

• 5 • 0	C. SECTION 13 COMMON BLOCK
•	NCG WY
ပ်ပ	COMMON /EVMES / IEVMES(3,38) , ISPMES(4,6) , ISPECL(6) Control of the common block
•	COMMON /FORCEDA / FXCHDA(3) , FYCHDA(3) , FZCHDA(3) , FXCHDA(3) , FXEDA + FXAEDA , FYAEDA , FYAEDA
 	C.SEAT ALONE FORCES COMMON BLOCK
	COMMON /FORCESA / FYAESA , FZAESA
ů o	C. SEAT/OCCUPANT FORCES COMMON BLOCK
5	COMMON /FORCESO / FXCASO(2) , FYCASO(2) , FZCASO(2) ,
	) FYSLSQ(6)
	FYCHSQ(3) . FYAESD .
3 3 3	C SECTION 4 COMMON BLOCK
	COMMON / IAIRCRI / TEMP PRESSUR. ZACVEL . XPOS . YPOS . + ZPOS . YTAIL . YTAIL . YTAIL . YAW . + ZPOS . YTAIL . YAW YTAIL YAW YA
	+ PITCH ROLL RYEL OVEL PVEL , WINDX , WINDX , WINDZ , XACVEL , CKPITHT, OENSITY, NPTSAAT, AAT(4,50), NPTSIAT, LAT(4,50).
, <u>v</u>	C. SECTION 9 COMMON BLOCK
• ů	COMMON /ICATPLT / INCAT CATLNI(2), CATSTK(2).TCI (2), **  ** ** ** ** ** ** **  ** ** ** ** *
 	C SECTION I COMMON BLOCK
• • •	C COMMON /ICONIRI / ISTART : ISTOP : ESTOP : IRESTRT. IUNITS . + ISTART : ISTOP : IPLOT : IDRIFLG. + IPHASE1: IPHASE2, IPHASE3 INTEGER ESTOP
5	***********

	/IDARTIN / IDART , DRIFRGE , XDRIAP(2),
175	C.SECTION 3 COMMON BLOCK
180	C. INFOOA DAIA (USED IN SUBROUTINE AFROIN) COMMON BLOCK
u G	NCZS(12) IAERCSO(12)
7	COMMON / IRAIL / RAILNIH . RAILANG . KYSB .
061	REAL
195	C SECTION 2 COMMON BLOCK C
200	C
205	. RKDELY(6), RKNPTS(6), IROKOUT , RWGHT(6), RKBURN(6), TSTAR(6) , 6), YPOSRK(8), ZPOSRK(6), RKTHRST(2,26), RKBETA(6), RKGAMA(6), RKTHRST(2,2
210	C SECTION 6 COMMON BLOCK C SECTION 6 COMMON BLOCK C SECTION 6 COMMON BLOCK C SECTION 7 SECTION 18750 1 17250 1
215	AREADA WGHTOAB, WGHTOAA,   IXYOA   IXZOA   IXZOA   IXCOA   IXCOA   IXCOA   IXCOA   IXCOA   IXCOA   IXXOA   I
220	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
225	WWW.CO

7	PROGRAM GESS 74/74 OPT=1	-		11N & 0+428 83/11/07 09
230	* * *	AREASA , HG 2POSBOT, XP C1SA	HGHTSA , WGHTSA , XPOSSCS, YPOSSCS, C2SA , C3SA	XPOSBOT, YPOSBOT, ZPOSSCS, C4SA
	REAL IXESA + IZZSA CONTROLLE CONTROL		IXYSA . IXZSA .	INYSA INZSA INYSA INZSA .
235	•	CK	•	• • • • • • • • • • • • • • • • • • • •
!	COMMON /ITVCIN /	/ ITVC , MP ROLLRL , PI RKANG	MPHI , MPSI , MTHE , PITCHRL, SMPLRAT, TVCDLAY,	MTHE . TVCDLAY.
240	TATA INTERIOR OF THE PROPERTY	MPH	MFV MITTE	
	C MASSES COMMON BLOCK	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •
245	COMMON /MASSES /	MASSOA1 MASSSA MASSOA1	MASSOAZ MAS MASSRK(6) MAS MASSOAZ MAS	MASSSO MASSO MASSD MASSDC MASSDC MASSCO MASSCO MASSCO MASSCO
	C MATRIX COMMON BLOCK	•		•
250	COMMON /MATRIX / COMMON /MATRIX /	DCMAE(3,3), DCMSE(3,3), DCMSAE(3,3), DCMSAE(3,3),	DCMRA(3,3) , DCMTS(3,3) , DCMOAE(3,3) ,	DCMSA(3.3) . DCMTE(3.3) . DCMSR(3.3) .
255	C MISCELLANEOUS DATA COMMON BLOCK	MMON BLOCK		
	COMMON /MISC	/ IPAGECT(31)	LINECT(31)	. IPRTCNT(31)
260	* * * * *	IEVLINE IDATE HEADSR HEADROL		LU HEADVEL HEADPIT BIAS BITACHT(2)
265	+ + + +	IHEADER(24) PRIMASS(2)		
270	INTEGER	XACCEL(3) REPTYPE PRIVGHT	YACCEL(3) BIAS PRIMASS	SACCEL(3) PRTLNGT PRTINDX
275	C CUMMRN BLOCK			
280	COMMON /MOMARMS / +REFLNSA ,URX(6) +REFLNSO ,REFLNOA ,REFLNSA ,URX(6) +XSSOCA(2),ZSSOCA(2),XSSORK +XSSORRE ,YSSORRE ,YSSORRE ,XSSORRE ,XSS	2), ZSSOCA(2), ZSSORRE, ZSSORRE	<b>ш ⊢</b>	9
	*XSSOSB(6),YSSOSB(6) *XSSCSAC ,YSSCSAC ************************************	.YSSOSB(6).ZSSOSB(6) .YSSCSAC .ZSSCSAC .YSSASRP .ZSSASRP	.XRRCSAC .YRRCSAC .ZRRCSAC .XSSOSRP .YSSOSRP .ZARMPE .ZARMPE .XRRDAP(2).YRRDAP(2).ZRRDAP(2)	AC ZRRCSAC , SRP ZSSOSRP , ZARMPE , PREDAP(2), ZRRDAP(2),
285	9	6), ZRRSB0(6)	, x550CP(2), Y550C	P(2), ZSSOCP(2),

•	+XSDAP(2 +XSRCSAC +XRSOSB +XRSOSB +XRSOSB +XRSOSB +XRSOSC +XRSOAC	YSSDAP(S) YSRCSAC YRSOSB YRRSB YAACSO		), XESDAC YESDAC ZESDAC XSSDAC XSSDAC YSSOAC YSSOAC XSSOAC XSSOAC XSSOAC XSSOCH(3) XSSOCH(3) ZSSOCH(3) XASDAC YASOAC ZASOAC XSCPAP(2) YSCPAP(2) ZSCPAP(2)	YESOAC YSSOAC YRRSBOT YSSOCH(3). YASOAC	ZESOAC ZSSOAC ZRRSBOT ZSSOCH(3). ZASOAC ZSCAP(2)		
S S	C SECTION 14 COMMON BLOCK	DIMMON BLOC	×					
	COMMON /	COMMON /PARCHUT / IRECOV	COMMON /PARCHUT / IRECOV	TRDPLOY		RECOVLL		
		•	RECDRAG	. RECOVPD	•	POROSR		
	•		XRECAP	YRECAP	•	ZRECAP	-	
	•		NPT SRL S	. RECOVLS(2,25)	7.25) .	IF TRECV	-	
	•		NPT SRFT	. RECOVFT(2,25)	7,25)	SEPFRCE	•	
	•		IDROGUE	. DRORAG2	•	DROGPD2		
	•		POROSD2	. VELCON	•	1FTDR02		
	+		NPTOFT2	, DROGFT2(2,25)	2,25) ,	JF TDRO1	-	
	•		NP TOF T	DROGFT1(;	2,25)	IDROGL S	•	
	•		NPT SOLS	DRDGLS(2,25)	25)	TDDPLOY		
	•		DISPLOY	DROGLL		DRDRAG1		
	•		DROGPD t	POROSDI	•	DROVELX		
			v 137000	Z ISONO	•	XDDUGAP	-	
			20000	2336000	•	111111111111111111111111111111111111111	•	
	•		TURUSAP	LORUZAF.	•		•	
	+		CHALIZ	GL 1M1	•	IULLAY	•	
	+		AREADC	WGHIDC.	•	TFPI	•	
	•		TFP2	TFP3	•	TDROGL S	-	
	•		CDDC	, NPTSRDT	•	RECOVDT (2,25)	5)	
••	C	********	•	*************	•••••		••••	
C+RA	C.RAIL VARIABLES COMMON BLOCK	ES COMMON	BLOCK				•	
••	*********	*********	**********	:	*******	*********	••••	
	COMMON /	COMMON /RAILVRB / FXR	FXR FYR	rR FZR	. xo1sp	YDISP		
: •								
Z :	TEGRATION	ROUTINE CO	C INTEGRATION ROUTINE COMMON BLOCK				•	
				:				
	COMMON /RKUITA	RKUTTA /		•	•	1KAUSU(193)	•	
	•		TRAUSA (193)		-	TRAUCH(97.3)	-	
	+		TRAJAC( 193)	1 . TVCEQS(228)	-	QUATSB(65)		
	•		OUATSA(65)			OHATAC(65)		
					-			
	•		110101	. ITCTASS		CC WINTED		
	•		POINTS	. I Y X	<del>-</del>	YPRX	-	
	+		××	. IKSUMX	ž.	IKPASSX		
	•		1 V 1 X	XTIAL	_	XCIAI		
			>			*****	•	
	•		×01.1	X   X   1   1   1   1   1   1   1   1	- :	<	-	
	•		1 YPKI 2X	. IPVIX		X1.1X	•	
	•		ICYIX	. ICVI 1X		IREIN		
•••	•••••••••••••••••		• • • • • • • • • • •	************	•••••	• • • • • • • • • • • • • • • • • • • •	••••••	
OL 2	C TOF PLOTTING FILE COMMON BLOCK	FILE COMB	MON BLOCK				•	
					•		• • • • • • • • • • • • • • • • • • • •	
· •	ODMMON VITTER	/ 11/60 /	CENCHAM(40 G)	6) TCVT (6)	•	16 x 1 2 ( A )	+	
	, , , , ,				•	100-1000	•	
	•		1 E X 1 3 ( 3 )	BAUD	•	WUNITEN		
	+		NCHANFR(2)	. NSENSOR(2)		I DUMMY (40)	•	
	•		RECORD(35)	LIMIL	•	TOELTA		
	+		TPUTAT	DI TIME (2)		NHE ANFR (2)		
				**************************************	•			
	א בינ א א בינ א		1EX11	. IEX12	•	16413	•	
	4			2				

C	•
C TORQUE SET ALONE COMMON BLOCK  C **********************************	• • •
L DCK 2) TMCASO(2)	* * * * * * * * * * * * * * * * * * *
+ TLTUBSO , TMTUBSO , TNTUBSO , TNTUBSO , TNTUBSO , TNSLSO(6) . TNSLSO(6) . TNSLSO(6) . TNSLSO(6) . TNSLSO(6) . TNRKSO(6) . TNRKSO(6) . TNRKSO(6) . TNRKSO(6) . TNCHSO(3) . TLAESO . TMAESO . TNDRTSO . TNDRTS	
DN BLOCK	RKICMND(3),
Common / DAMPING / DMPGF3 DMPGF3	
C AERODYNAMICS INFORMATION COMMON BLOCK C. C	OAMACH , , , , , , , , , , , , , , , , , , ,
EL. SUMA A CMOA . A CMSA .	SUMMACH . SUM CNOA . CNOA . CNOA . CNOA . CNOA . CNOA
(CC(3) (1(3) (1TCH(3))	•
RZACC(3) . RZVEL(3) . RZPOS(3) . RRVEL(2)	
■ it ti	

00	U
	CALL OPENMS(2,INDEx,53,0) READ (1,10) DOWHAT 10 FORMAT (8A10) IF (DOWHAT ,EQ, 10H ) GD TO 9000
405	(DOWHAT .NE. 5HSTART) GO TO 9000
4 to	
4 15	
420	C CHECK TOR REQUESIEU SIOP TIME OR SIOP EVENT  C
425	
<b>4</b> 30	-
435	
440	CALL DYNAMGG IF (FERFIG.NE. 0) GD TO 9CO CALL DRICAC IF (IERRELG.NE. 0) GD TO 9CO CALL UPDVECT
445	
450	CALL SEATOCL  If (IERFLG .NE. 0) GD TO 900  CALL ACSEP  CALL SEPINIT  If (IREIN .Eq. 0) GD TO 202
455	CALL REINIEG 60 TO 201 202 CONTINUE

	PROGRAM GESS	74/74 OPT=1	0PT=1				F	FTN 4 6+428	+428	83/11/07. 09 41.53	60	41.53	PAGE	
		CALL OCCALON IF (!ERRFLG .	NE . 0)	E0 1	06 0	0								
460		IF (IERRFLG CALL SLUGGON IF (IERRFLG N	NE. 0) G	G0 1	006	Q								
594		CALL QUAT IF (IERRFLG. CALL REPORTS IF (IERRFLG. CALL TERRFLG.	NE. 0)	60 1	06 O	8 8								
470	300	TF (TERREGG GG TO 9000	NE. 0)	60 1	06 0	8				:				
475	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	HERE IF A FAT	AL ERRO	R ED	S EN	G GET HERE IF A FATAL ERROR WAS ENCOUNTERED  C GET HERE IF A FATAL ERROR WAS ENCOUNTERED  G GET HERE IF A FATAL ERROR WAS ENCOUNTERED  G GET HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G T HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G T HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G T HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G G T HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G G T HERE IF A FATAL ERROR WAS ENCOUNTERED  G G G G G G G G G G G G G G G G G G G	•			* *				
480	0001 0001	HERE IF NO ST	ART CAR		QNO					: :				
8. 10.	9000	WRITE (5, 1016 FORMAT(1H1, 50 CONTINUE STOP END	. •NO .	TARI	CAR	2D - RUN ABORTED	<u>:</u>							

```
COMMUNICATIONS

COMMUNICATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C SECTION 9 COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMON /ICONTRL / ISTART TSTOP , ESTOP , IRESTRT, IUNITS , ISEATTR, ISOSEP , IPLOT , IDRIFLG, IPHASE3 , IPHASE3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRTWGHT (2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIEMP(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11MES(38)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LU
HEADVEL
HEADP I T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MAXEVNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JAKEVIS(31) , PRIFRO, PI1, PI2, PI3
PRIFRO, PI1, PI2, PI3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INDX - USED AS INDEX FOR THE NUMBER OF CATAPULTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HEADYAW
HEADWGT
PRTLNGT(2)
IEVENTS(38)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , LINECT(31)
. MAXREPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . IERRFLG
. HEADALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REPTYPE(5.31)
IHEADER(24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMON /IREPORT / IREPTS(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1EVLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C NON-COMMON VARIABLES DEFINED:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMON /ICATPLT / INCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HEADSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ESTOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C POTENTIAL ERROR CONDITIONS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C SECTION 1 COMMON BLOCK
SUBROUTINE ACSEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INTEGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INTEGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ဓ္ဓ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                                        ŧ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                       S)
                                                                                                                                                                                                                                                                     0
```

Ξ

9

65

9

75

```
PAGE
   83/11/07. 09 41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                     . TRAJSO(193)
                                                                                                        PKZVEL
SAVIIME
ZACCEL(3)
PRILNGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QUATSO(65)
QUATAC(65)
IRKPASS
                                                                                                                                                                                                                                                                                                                             C INTEGRATION COMMON BLOCK
C COMMON /RKUTTA / TIME TIMES DELTAT TRAJOR(193)
TRAJOR(193) TRAJOR(193) TRAJOR(193)
TRAJOR(193) TOVEOS(225)
TOVEOS(225) TO
   FIN 4 6+428
                                                                                                                                                                                                                                                                                                  . PRTINDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IKPASSX
IVPRI 1X
IPYI 1X
IREIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(INTSTP.EQ.O) GO TO 9999
IF(IEVENTS(37) .GT. 0) GO TO 9998
IF(INCAT GE.1).AND.(IEVENTS(3).EQ.O)) GO TO 9999
IF(INCAT EQ.2).AND.(IEVENTS(4).EQ.O)) GO TO 9999
IF(IEVENTS(5).EQ.O) GO TO 9999
IEVENTS(37) = 1
TIMES(37) = TIME
CONTINUE
                                                                                                                                                                                  VACCEL (3)
BIAS
                                                                                                               PRT I NDX
                                                                                                                                                                                                                                                                                              PRIMASS
                                                                                                                                             XYZ(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IKSUMX
IYPRIX
IPVIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF(IPHASE: GT. 1) GD 10 9989

J = IFIX (1.E6*TIME5)

K = IFIX (1.E6*(DTPHAS2*P12*5.E-10))

IF (MODIJ,K) .NE. 0) GD 10 9999

PRTFRQ = P1.31
                                                                                                        PRTMASS(2)
ZVECT(3)
XACCEL(3)
REPTYPE
PRTWGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF(IPHASE1 .GT. 0) GO TO 75
U=IFIX(1.E6-TIMES)
V=FIX(1.E6-(DTPHAS2+5.E-10))
IF(MOD(J,K).NE.0) GO TO 9999
IPHASE1 = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1KX
1V1X
1V13X
1VPR12X
                                                                                                                                                                                                                                                                                              PRTEMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CYIX
0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPRTCNT(I) . PRTFRQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DELTAT * DTPHAS2
IREIN * 1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JPHASE 1 = 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONT INUE
                                                                                                                                                                                                                       INTEGER
   SUBROUTINE ACSEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75
```

8

85

9

95

PAGE

74/74 OPT=1

SUBROUTINE AERFMOA

9

ō

20

25

30

35

**\$** 

20

55

Ç

COMMON / IAIRCR1 / TEMP PRESSUR, ZACVEL . XPOS . VPOS . PROS . PROS . PROS . VATIL . V	COMMON / IAIRCRI / IEMP	XPOS YPOS . TAIL YAW . VEL , PVEL .
1	### ### ### ### ### #### #### #### #####	
PITCH   ROLL   RVEL   OVEL   PVEL	MINDA   WINDY   WINDY   WINDZ   XACVEL   COPPE	
### ##################################	MINDX   WINDY   WINDZ   XACVEL   CKPI	•
DENSITY   NPTSANT   ANT (4.50)   NPTSLAT LAN (4.50)	DENSITY, NPTSAN1, AAT(4.50), NPTSLAT, LAT   AGSFLG	
TACSFLG	TACSFLG	NPTSLAT LAT(4 50)
INFOO4 DATA (USED IN SUBROUTINE AEROIN) COMMON BLOCK   COMMON / INFOO4   NCSS(12)	INFOO4 DATA (USED IN SUBROUTINE AEROIN) COMMON BLOCK   COMMON / INFOO4 / NCXS(12)   NOYS(12)   NGZS(12)	
INFOO4 DATA (USED IN SUBROUTINE AFROIN) COMMON BLOCK	INFOO4 DATA (USED IN SUBROUTINE AEROIN) COMMON BLOCK	*************
COMMON / INFOOA / NCX (12)	CDMMON / INFOO4 / NCXS(12)	*
COMMON / INFOOA / NGS(12)	COMMON / INFGO4 / NCXS(12) . NCYS(12) . NCZS(12)  COMMON / ISEATOC / IPCNIL , XCGSD , YCGSG , ZCGSG , IXXSG COMMON / IXSEATOC / IXXSG , IXYSG , IXYSG , IXXSG , IXXGG , IXXG ,	*********
CTION 6 COMMON / ISEATOC / IPCNIL , XCGSD , YCGSO , ZCGSO , IXXSO	SECTION 6 COMMON BLOCK  COMMON /ISEATOC / IPCNIL	, NCZS(12)
CITON 6 COMMON 8LOCK  COMMON /ISEATOC / IPCNIL , XCGSD , YCGSO , IXXSO	COMMON / ISEATOC / INVESTIGATION 6 COMMON BLOCK  ENTRY CORNERS O	I AERCSU(12)
COMMON / ISEATOC / IPCNIL , XCGSD , YCGSD , ZCGSO , IXXSO    ***COMMON / ISEATOC / IPCNIL , XCGSD , YCGSD , IYZSO , IXXSO    ***COMMON / IXXOA , IXXOA , IXXOA , IYXOA , IYXOA    ***IXXOA , IXXOA , IXXOA , IXXOA , IYYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , IYYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , IYYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , IYYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , IYYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , IYYOA , IXXOA , IXYOA , IXXOA , I	COMMON / ISEATOC / IPCNIL	•
COMMON /ISEATOC / IPCNIL , XCGSD , YCGSO , ZCGSO , IXXSO , IXYSO , IXZOA , IXYOA , IXYOA , IXYOA , IYYOA , IYYOA , IXXOA , IXYOA , IXY	COMMON /ISEATOC / IPCNIL , XCGSD , YCGSO , ZCGSO , IXXSO	************
TXYSG   TXYSG   TYYSG   TYYSG   TYYSG   TYYSG	TXYSO   TXZSO   TYYSO   TXYSO   TXYSO   TXYSO   TXYSO   TXYOA   TXZOA   TXYOA   TXZOA   TXYSO   TXYSO   TXYSO   TXYSO   TXYSO   TXZSO   TXYSO   TXZSO   TZZSO   TZZS	CGS0 . 1xxs0 .
AREASO   AREASO   WGHTOAB   WGHTOAA	TXOA	•
IXXOA IXYOA IXOA IYYOA IYYOA IYYOA IYXOA IZZOA XCGOA XCCCA XCGOA X	TXXOA   TXXO	
TAXON   TAXO	TXX50	
IXX50   IXX5	1220A	
TXSO   TXSO   TXSO   TYSO   TYSO   TYSO   TYSO   TYSO	TXSO   TXXSO   TXXSO   TXXSO	
12250   1XXOA   1XZOA   1YYOA   1YYOA   1YYOA   1YZOA   1ZZOA   1XZOA   1XZOA   1YYOA   1YYOA   1YZOA   1ZZOA   1ZZO	12250	•
TRIX COMMON BLOCK  CDMMON /MATRIX / DCMAE(3.3) . DCMR5(3.3) . DCMSE(3.3) . DCMSE(3.	TYZGA   TYZG	•
TRIX COMMON BLOCK  CDMMON /MATRIX / DCMAE(3.3) . DCMTE(3.3) . DCMSE(3.3) . INECTEL . LINECT(3.1) . IPRTCNT(3.1) . MAXEVNT . MAXEVNT . LEVLINE . HEADVEL . DRTLMGT(2) . PRTLMGT(2) . PRTLMGT	TRIX COMMON BLOCK  COMMON /MATRIX / DCMSE(3.3) , DCMRA(3.3) ,  DCMSAE(3.3) , DCMTS(3.3) ,  DCMSAE(3.3) , DCMTS(3.3) ,  DCMOUM(3.3) ,  SCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) , LINECT(31)  COMMON /MISC / IPAGECT(31) , LINECT(31)  HEADRIL HEADRIL , HEADRIL HEADRIL HEADRIL HEADRIL HEADRIL HEADROL HEADWOX  HEADRER HEADROL HEADWOX  HEADRER HEADROL HEADWOX  HEADRER HEADROL HEADWOX  HEADRER HEADROL HEADWOX  HEADROL HEADWOX  HEADROL HEADWOX  HEADROL HEADWOX  HEADROL HEADWOX  NAVCEL(3) , VACCEL(3)  INVEGER REPTYPE BIAS	
COMMON /MATRIX / DCMAE(3,3) . DCMRA(3,3) . DCMSA(3,3) . DCMSE(3,3) . IPRTCNT(31) . IPRTCNT(31) . MAXENT . HEADVEL . HEADVE	COMMON /MATRIX / DCMAE(3.3) . DCMRA(3.3) . DCMRA(3.3) . DCMSE(3.3) . DRILNGY . BRADER (2.3) . MASTENDX . SACCE((3.3) . VACCE((3.3) . VACC	************
COMMON /MATRIX / DCMAE(3,3) DCMRA(3,3) DCMSA(3,3) DCMSE(3,3) DCMSE	COMMON /MATRIX / DCMAE(3.3) . DCMRA(3.3) . DCMSE(3.3) . DCMSE(3.3) . DCMAE(3.3) . D	
COMMON / MATRY CONTE(3,3) DEMTS(3,3) DEMTS(3	COMMON / MAIRE COMMON 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 21
COMBON   C	COMMON (3.3), DCMOAE(3.3), DATE	M17 (3.3)
COMMON BLOCK	SCELLANEOUS DATA COMMON 8 LOCK  COMMON /MISC / IPAGECT(31) . LINECT(31)  HANCLINE . IERRED  HEADSR . HEADLT  HEADSR . HEADRIT  HEADSR . HEADRIT  HEADRED  HEADRIT HEADRIT  HEADRED  HEADRIT HEADRIT  HANCEL(3) . YACCEL(3)  HANCEL(3) . YACCEL(3)  HANCEL(3) . YACCEL(3)	(S) (S) (S) (S) (S)
SCELLANEOUS DATA COMMON BLOCK   LINECT(31)   IPRTONT(31)	SCELLANEOUS DATA COMMON BLOCK COMMON /MISC / IPAGECT(31) LINECT(31) + HANCELINE   IERRFLG   IERR	
SCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31)  HALLINE . MAXEPT . MAXENT  HEADVEL . HEADLT . HEADVEL  HEADVEL . HEADVEL . HEADVEL . BTAS  HEADVEL . HEADVEL . HEADVEL . BTAS  HEADVEL . HEADVEL . HEADVEL . SAVIIME	SCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) , LINECT(31)  COMMON /MISC / IPAGECT(31) , LINECT(31)  HEADST   HEADALT    HEADST   HEADALT    HEADST   HEADALT    HEADST   HEADALT    HEADST   HEADALT    HEADST   HEADT    HEADT	**************
IPAGECT(31)	HEADWAT HEADWA	•
IPAGECT(31)	/ IPAGECT(31) . LINECT(31) MAXLINE . MAXREPT IEVLINE . IERRFLG IDATE . HEADALT HEADSR . HEADYAW HEADROL . HEADWGT REPTYPE(5,31) . PRILNGT(2) . IHEADER(24) . IEVENTS(38) . IMVOC PRIMASS(2) . PRILNOX ZVECT(3) . VACCEL(3) . KACCEL(3) . VACCEL(3) . REPTYPE . BIAS	***********
MAXLINE         MAXREPT         MAXEVNI           IEVLINE         IERRELG         LU           IDATE         HEADALT         HEADVEL           HEADYSR         HEADVEL         HEADVEL           HEADYSR         HEADVEL         HEADVEL           HEADYSR         HEADVEL         BIAS           REPTYPE (5,31)         PRTUNGT (2)         PRTUMGHT (2)           IMEADER (24)         IEVENTS (38)         JIMES (38)           IMVOC         PRTUMP (2)         PRTUMP (2)           ZVECT (3)         VACCEL (3)         SAVTIME           REPTYPE         BIAS         PRTUMGT           PRTUGHT         PRTUMGT         PRTUMGT           PRTUMGT         PRTUMGT	MAXLINE MAXREPT IEVLINE IERRLG IDATE HEADALT HEADSR HEADWAW HEADSR HEADWGT REPTYPE(5,31) PRTLNGT(2) IHEADER(24) IEVENTS(38) IMVDC PRTMASS(2) PRTINDX ZVECT(3) XYZ(3) XACCEL(3) YACCEL(3) REPTYPE BIAS	. IPRTCNT(31)
IEVLINE	IEVLINE IERRFLG IDATE HEADALT HEADSR HEADAUT HEADROL HEADWAY HEADROL HEADWAY HEADROL HEADWAY IMEADER(24) IEVENTS(38) IMVOC PRIMASS(2) PRIINDX ZVECT(3) XYZ(3) XACCEL(3) XACCEL(3) REPTYPE BIAS	MAXEVNT
IDATE	IDATE	רם
HEADVAW HEADPIT HEADWGT BIAS BIAS  31) PRTLNGT(2) PRTWGHT(2) I EVENTS(38) TIMES(38) I MVDC PRTINDX PREMP 2) PRTINDX PRZVEL XYZ(3) SAVIIME YACCEL(3) PRTLNGT BIAS PRTINDX	HEADSR HEADVAW HEADROL HEADWGT REPTYPE(5,31) PRTLNGT(2) IHEADER(24) IFVENTS(38) IMVDC RTMASS(2) PRTINDX ZVECT(3) XYZ(3) XACCEL(3) XYZ(3) REPTYPE BIAS PRTINGHT	. HEADVEL
HEADERL HEADWGT BIAS REPTYPE(5,31) PRILNGT(2) PRIWGHT(2) IHEADER(24) IEVENTS(38) TIMES(38) INVOC PRIEMP(2) PRIMASS(2) PRITNDX PRIEMP(2) ZVECT(3) XYZ(3) SAVTIME XCCEL(3) YACCEL(3) ZACCEL(3) REPTYPE BIAS PRILNDX PRIEMP PRIMASS PRITNDX	HEADROL HEADWGT  REPTYPE(5,31) PRTLNGT(2)  IHEADER(24) IEVENTS(38)  IMVDC  PRTMASS(2) PRTINDX  ZVECT(3) XYZ(3)  XACCEL(3) YACCEL(3)  REPTYPE BIAS	HEADPIT
REPTYPE(5,31) PRILNGT(2) PRTWGHT(2) IHEADER(24) IEVENTS(38) TIMES(38) IMNOC PRTEMP (2) PRTMASS(2) PRTINDX PRZVEL ZVECI(3) XYZ(3) SAVTIME XACCEL(3) YACCEL(3) ZACCEL(3) REPTYPE BIAS PRTEMP PRTEMP PRTEMP PRTINDX	REPTYPE(5,31), PRTLNGT(2) IHEADER(24), IEVENTS(38), IMVDC PRTMASS(2), PRTINDX ZVECT(3), XYZ(3) XACCEL(3), YACCEL(3) REPTYPE, BIAS PRTMGHT	S I A S
	HEADER(24)	DRIMGHT(2)
PRIMASS(2) PRIINDX PRIEMP(2) ZVECI(3) XYZ(3) SAVIIME XACCEL(3) YACCEL(3) ZACCEL(3) REPTYPE BIAS PRILNGT PRIEMP PRIEMP PRIMASS PRIINDX	INVOC   PRIEMP(   PRIEMP(   PRIEMP(   PRIMASS(2)   PRIINDX   PRIVEL   PRIVEL   PRIMGHT   PRIMGTT   PRIMG	TIMES(38)
PRTMASS(2) PRTINDX PKZVEL ZVECT(3) XYZ(3) SAVTIME XACCEL(3) YACCEL(3) ZACCEL(3) REPTWGHT BIAS PRTLNGT PRTWGHT PRTMASS PRTINDX	PRTMASS(2), PRTINDX, PKZVEL ZVECT(3), XYZ(3), SAVTIME XACCEL(3), YACCEL(3), ZACCEL(5) REPTYPE, BIAS, PRTLNGT	
ZVECT(3) XYZ(3) SAVTIME XACCEL(3) YACCEL(3) ZACCEL(3) REPTYPE BIAS PRTUNGT PRTWGHT PRTEMP PRTEMP	ZVECT(3) XYZ(3) XACGEL(3) YACGEL(3) REPTYPE BIAS PRIMGHT	
XACCEL(3) YACCEL(3) ZACCEL(3) REPTYPE BIAS PRIMGH PRIMGHT PRIMGH PRIEMP PRIMASS PRINDX	XACCEL(3) YACCEL(3) REPTYPE BIAS PRINGHT	SAVITA
REPTYPE BIAS PRILNGT PRIMGHT PRIEMP PRIMASS PRINDX	REPTYPE BIAS	ZACCEL (3)
PRIMGHT PRIEMP PRIMASS PRIINDX	TERTAL	PRTLNGT
PRIEMP PRIMASS PRINDX	-	
•••••••••••••••••••••••••••••••	. PRIMASS .	. PRTINDX
	******************	:
	1	
REFLNSA .URA(6) .URY(6)	*REFLINSO , REFLINDA , REFLINSA , URA(6) , URY(6) , URZ(6)	,uRZ(6)

115									
**SSOMME 'SSOMME 'SSOMME 'SSONME 'SSOSME 'SSOSME ' **SSOSME 'SSOSME 'S						1			
**SSOSSIE   VSSOSSIE   VSSOSSE   VSS	ē.	+XSSOMRE	. Y S S D M R E	. 25SOMRE	.xSS0801	. Y S S O B O T	, ZSS0801		
***SSCSAC ***YSSCSAC ***XSSCSAP****  ***SSASAP****  ***XSASAP****  ***XSASAC ***XSASAP****  ***XSASAC ***X		+xccosale)	VSSASBIBL	75505B(6)	XDBCSAC	YPPCSAC	ZRRCSAC		
### ### ### ### ### ### ### ### ### ##		in lacoccy.		, , , , , , , , , , , , , , , , , , , ,					
**************************************					ASSUSKY.	TACUCCT.	, KSSUSKF.		
**************************************		•					ZARMPE .		
**************************************		0054554	VSCASDD	2CCACDP	X PRO A P ( 2 )	VARABARIO	) ZERDAP(2)		
**************************************			, variable)	4/000000	(0)40000	6,00000	7 255000(0)		
**************************************	2	TAKK SOULD	THE SOCIAL	CAR SOCIO			, 1330001, 137,		
***SESSEC*** (***SESSEC*** (***SSOAC***, \$\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		+XSSDAP(2)	. YSSUAP(2)	, ZSSDAP(2)	, AESUAC	YESUAC.	. KESUAC .		
**************************************						YSSOAC	. 2550AC		
**************************************		ı				VODCOAT	700000		
**ARSS				•	יייייייייייייייייייייייייייייייייייייי	יאר שני	. KAR3000		
C INTEGRATION ROUTINE COMMON BLOCK  INTS PRACES INFRANCES INFRANCE					, xSSOCH(3)	. YSSOCH(3	). 2SSOCH(3).		
C INTEGRATION ROUTHS COMMON BLOCK C INTEGRATION ROUTHS COMMON BLOCK C COMMON / RKUTIA / TIME, TIME5 DELTAT TRAJAG(193) TRAJAG(	Ľ				XASOAC	VASOAC	ZASOAC		
COMMON / RKUITA / TIME ; TRAJOR (193)   TRAJOR (193	,				X SCPAB(2)	VSCPAP(2	) ZSCDAP(2)		
C INTEGRATION ROUTINE COMMON BLOCK  C COMMON / RKUTTA / TIME, TIMES DELTAT  TRAJAC(193) TVCEGS(225) OUATSG(65)  OUATSG(65) OUATSG(65) OUATSG(65)  OUATSG(65) OUATSG(65) OUATSG(65)  OUATSG(65) OUATSG(65) OUATSG(65)  INTST								4	
COMMON / RRUIT A / TIME / TRAUSO(193)  COMMON / RRUIT A / TIME / TRAUSO(193)  TRAUSA(193)   TRAUDA(193)   TRAUDA(193)    TRAUDA(193)   TRAUDA(193)   TRAUDA(193)    COMMON / ARROCTS / GARLPH   TAREA   TRAEA    COMMON / ARROCTS / GARLPH   SABETA   SAVEL   SAMACH    SAALPH   SABETA   SAVEL   SOWACH    COMMON / ARROCTS / GAALPH   SABETA   SAVEL   SOWACH    COMMON / ARROCTS / CVSA   CVSA   CVSA   CVSA   CVSA    CCOMMON / ARROCTS / CVSA   CVSA   CVSA   CCSA    CCOMMON / ARROCTS / CVSA   CVSA   CCSA   CLSA   CMSA    CCOMMON / ARROCTS / CVSA   CVSA   CCSA   CLSA    CCOMMON / ARROCTS / CVSA   CVSA   CCSA    CCOMMON / ARROCTS / CVSA   CVSA   CCSA    CCOMMON / ARROCTS / CVSA   CVSA   CCSA    CCOMMON / ARROCTS / CVSA   CVSA    CCOMMON / ARROCTS / CVSA   CVSA    CCOMMON / ARROCTS / CVSA   CVSA    CCOMMON / ARROCTS / CVSA    CCOM									
COMMON / RKUTTA / TIME, TIMES DELTAT  + TRAJSA(193)   TRAJOA(193)   TRAJOA(193)    + TRAJSA(193)   TVCEGS(225)   OUATGA(65)    - TRAJSA(193)   TVCEGS(225)   TVPRX    - TYPRX   TYPRX   TYPRX    - TYPRX    - TYPRX   TYPRX    - TYPRX			DUTINE COM	MON BLOCK				•	
COMMON / RKUTTA / TIME, TIMES DELTAT TRAJOG(193)  + TRAJOG(193) TRAJOG(193) TRAJOG(193)  - TRAJO			*********	*********	*********	********		• • • • • • • • • • • • • • • • • • • •	
TRAJSA(193)   TRAJOA(193)   TRAJCH(97,3)			`				TRA (507 193)		
TRAJAC(193)   TVCBCS(225)   OUATSO(65)	,					. (664)	TO 1010		
TRAME(193) TYGEOS(225) GUANTSO(65) TO THE CONTROL OF THE CONTROL O		•	-	CORL JACOAN	. IKAUDA	(281)	18 (a) (a)		
10151P   104154   1		•	-	RAJAC (193)		(225)	OUATSO(65) .		
INTSTP   IPCPASS   IRRPASS   IRRPASS   INTST		•	C	(18754/65)		(68)	OUATAC(65)		
TYPEX   TYPE			•				1000		
IROUNTS   INSUMX		•	-	10.1			CCATANI		
IVIX	ı	+	-	POINTS	۲,	-	IYPKX		
1713   1714   1714		•		×	I K SI IMX		IKPASSX		
1713			• •	*	***	•	10101		
17PRIX   1		*	-	4 1 X	Y 1 1 1 .	•			
C		<b>+</b>	-	XE1 A	. IYPRIX	•	IYPRIIX .		
C COMPUTE RESULTANT VELOCITY IN OASE (SAME AS EFCS)  C COMPUTE RAUDA(S) - VAVIND  YOLL = TRAUDA(S) - VAVIND  YOLL = TRAUDA(S) - VAVIND  YOLL = TRAUDA(S) - VAVIND  C COMPUTE ANGULAR VARIABLES  C COMPUTE ANGULAR VARIABLES  C COMPUTE ASIN(SNA)		•		XC100V	IPVIX		IPY11X		
C TORQUE OCCUPANT ALONE COMMON BLOCK C TORQUE OCCUPANT ALONE COMMON BLOCK C COMMON /TORODA / TLCHOA(3) TMCHOA(3) TNAEDA C AERODYNAMICS INFORMATION COMMON BLOCK C C AERODYNAMICS INFORMATION COMMON BLOCK C C COMMON /AEROCFS / GAALPH , GABETA , DAVEL , SAMACH , SABETA , SOVEL , SAMACH , SOBETA , SOVEL , SOMACH , SOBETA , SOVEL , SOMACH , SOBETA , SOVEL , SOMACH , CXSA , CYSA , CZSA , CLSA , CMSA , CNSA , CXSA , CYSA , CZSA , CLSA , CMSA , CNSA , CXSA , CYSA , CZSA , CLSA , CMSA , CNSA , CXSA , CYSA , CZSA , CYSO , CASO , CNSO , CNS			• •			•			
C COMPANY ALONE COMMON BLOCK C COMMON / TORODA / TLCHOA(3) : TMCHOA(3) : TMCHOA(3) : COMMON / TORODA / TLCHOA(3) : TMCHOA(3) : TMAEDA C C AERODYNAMICS INFORMATION COMMON BLOCK C COMMON / AEROCFS / DAALPH : SABETA : SAVEL : SAMACH : SOBETA : SOWEL : SOMACH : SOBETA : SOWEL : TRAUDA(5) - VYWIND : C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS) C COMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR : ASIN(SNZ) COSZ = COS(OARLPH)	_	*	-	CYIX		•	KEIN		
C TORQUE OCCUPANT ALONE COMMON BLOCK  C COMMON / TORQOA / TLCHOA(3) : TMCHOA(3) :  TLAEDA : TMAEDA : TNAEDA  C AERODYNAMICS INFORMATION COMMON BLOCK  C COMMON / AEROCFS / DAALPH : GABETA : GAVEL : SAMACH : SABETA : GAVEL : SAMACH : SOMETA : GOWEL : SOMACH : SOMETA : GONE : CNSA : CYSA : CYSA : CYSA : CYSA : CYSA : CASA : CMSA : CNSA : CYSA : CYSA : CASA : CMSA : CNSA : CYSA : CYSA : CASA : CMSA : CMSA : CNSA : CYSA : CYSA : CASA : CMSA : CMSA : CNSA : CYSA : CYSA : CASA : CMSA : CMSA : CMSA : CYSA : CYSA : CYSA : CASA : CMSA : CMSA : CMSA : CMSA : CMSA : CYSA : CYSA : CASA : CMSA : CMMA : CMSA :			*********	*********	:	********	**:********	****	
COMMON /TORODA / TLCHOA(3) . TMCHOA(3) .  TLCHOA(3) . TMAEDA . TNAEDA . TNA			NT ALONE C	DMMON BLOCK	v			•	
COMMON /TOROGA / TLCHOA(3) . TWCHOA(3) . TNAEDA  TLAECA . TMAECA . TNAEDA  C AEROCYNAMICS INFORMATION COMMON BLOCK  C COMMON /AEROCFS / GAALPH . GABETA . GOVEL . GOMACH .  SAMLPH . GABETA . GOVEL . SAMACH .  SAMLPH . SABETA . SAVEL .  SAMLPH . SABETA . SAWACH .  SAMLPH . SABETA . SAWACH .  SAMLPH . SABETA . SAWACH .  C CXA . CYSA . CZSA . CLSA . CNSA .  CXSA . CYSA . CZSA . CLSA . CNSA .  CXSA . CYSA . CZSA . CNSA . CNSA .  CXSA . CYSA . CZSA . CNSA . CNSA .  CXSA . CYSA . CZSA . CNSA . CNSA .  CXSA . CYSA . CYSA . CNSA . CNSA .  C COMPUTE RESULTANT VELDCITY IN GACS (SAME AS EFCS)  C COMPUTE TRAJGA(6) - VYWIND  ZVEL = TRAJGA(6) - VYWIND  C COMPUTE ANGULAR VARIBBLES  C COMPUTE ASTACRAN(YVEL.XVEL)  CGS2 = CGS(GAALPH)  CGS2 = CGS(GAALPH)			********	*********	*********	*******	************	****	
COMMON / AEROCFS / GAALPH ; GABETA ; GAVEL ; DAMACH ; SOBETA ; GALPH ; SOBETA ; GAVEL ; SAMACH ; SOBETA ; GASA ; CNSA ; CNSA ; CYSA ; C			T / TOOGC	10,7000	TUCHOACA	TACHUK	(3)		
C AERODYNAMICS INFORMATION COMMON BLOCK C CEROOYNAMICS INFORMATION COMMON BLOCK C COMMON / AEROCFS / GAALPH , GABETA , GAVEL , GAMACH , SABETA , SOVEL , SAMACH , SABETA , SOVEL , SAMACH , SCALPH , SABETA , SOVEL , SOMACH , SCALPH , SABETA , SOVEL , SOMACH , SCALPH , CYSA , CZSA , CLSA , CMSA , CNSA , CXSA , CYSA , CZSA , CLSA , CMSA , CNSA , CXSA , CYSA , CZSA , CLSA , CMSA , CNSO , C		OI / NOMEON	- ' WOON	(5) (5)	C ACLOSE		. 6		
C AERODYNAMICS INFORMATION COMMON BLOCK  C COMMON /AEROCFS / GAALPH , GABETA , GAVEL , GAMACH , SABETA , SAVEL , SAMACH , SABETA , SAVEL , SAMACH , SABETA , SOVEL , SAMACH , SABETA , SOVEL , SOMACH , SOME , CYSA		•	_	LAEGA .	MAEUA	. INAEUA			
C AERODYNAMICS INFORMATION COMMON BLOCK C COMMON / AEROCFS / GAALPH , GABETA , DAVEL , DAMACH ,			*********	*********		********	************		
COMMON / AEROCFS / GAALPH , GABETA , DAVEL , DAMACH , SAALPH , SABETA , SAVEL , SAMACH , SOALPH , SOBETA , SOVEL , SOAMACH , SOALPH , SOBETA , SOVEL , SOANACH , SOALPH , SOBETA , SOVEL , SOANACH , SOALPH , SOBETA , SOVEL , SOANACH , SOALPH , SOBETA , CVSA , CVSA , CVSA , CVSA , CVSA , CNSA , CNS		C AFDODVAMANICS	I NE ODWA I I O	N COMMON R	DCK			•	
COMMON / AEROCFS / GAALPH , GABETA , DAVEL , SAMACH , SABLTA , SAVEL , SAMACH , SABLTA , SAVEL , SAMACH , SOALPH , SABETA , SAVEL , SAMACH , SOALPH , SOBETA , SOVEL , SOANACH , CASA , CYOA ,		College College				****		;	
COMMON / AEROCFS / GAALPH , GABETA , DAVEL , DAMACH ,  * SAALPH , SABETA , SAVEL , SAMACH ,  * SOALPH , SABETA , SAVEL , SAMACH ,  * CXGA , CYGA , CYGA , CNGA , CNGA ,  * CXSA , CYSA , CZSA , CNSA , CNSA ,  * CXSA , CYSA , CZSA , CNSA ,  * CXSO , CYGO , CYGO , CNSO ,  * CXSO , CYGO , CYGO , CNSO ,  * CXSO , CYGO , CYGO ,  * CXSO , CYGO , CYGO ,  * CXSO									
SAALPH , SABETA , SAVEL , SAMACH , SAMACH , SOBETA , SOWEL , SOMACH , SOBETA , SOVEL , SOMACH , CXSA , CYSA , CYSA , CYSA , CNSA		COMMON /A	EROCFS / O		OABETA	OAVEL	. DAMACH	•	
SOMETA   SOMETA   SOMETA   SOMETA		•			CARETA	CAVEL	CAMACH		
+ CYOA CYOA CLOA CMOA CNOA CNOA CNOA CNOA CNOA CNOA CNOA CN	•	•	· •		111111111111111111111111111111111111111			•	
CCOMPUTE RESULTANT VELOCITY IN OACS (SAME AS EFCS)  CCOMPUTE RESULTANT VELOCITY IN OACS (SAME AS EFCS)  CCOMPUTE TRAUDA(S) - VYWIND  TVEL = TRAUDA(S) - VYWIND  CCOMPUTE ANGULAR VARIABLES		•	n	_	ž	3045	Ē	•	
CXSA CYSA CLSA CNSA CNSA CNSA CNSA CNSA CNSA CNSO CNSO CNSO CNSO CNSO CNSO CNSO CNSO		•	J	•	•	CLOA	-		
C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C XVEL = TRAUDA(S) - VYWIND  YVEL = TRAUDA(T) - VYWIND  ZVEL = TRAUDA(T) - VYWIND  C DAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C C C C C C C C C C C C C C C C C C C		•	ر			A2 13			
C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C XVEL = TRAJDA(S) - VXWIND  YVEL = TRAJDA(T) - VXWIND  ZVEL = TRAJDA(T) - VXWIND  C OAVEL = SQRT(XVEL + XVEL + YVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C C C C C C C C C C C C C C C C C C C		•	,	•	•		•	•	
C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C XVEL = TRAJOA(S) - VXWIND  YVEL = TRAJOA(T) - VYWIND  ZVEL = TRAJOA(T) - VYWIND  C DAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C C C C C C C C C C C C C C C C C C C		•	J	•	•		•	_	
C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C XVEL = TRAUDA(S) - VXWIND  YVEL = TRAUDA(B) - VYWIND  ZVEL = TRAUDA(T) - VZWIND  C DAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C C C C C C C C C C C C C C C C C C C	ın								
C COMPUTE RESULTANT VELOCITY IN DACS (SAME AS EFCS)  C XVEL = TRAJOA(S) - VXWIND YVEL = TRAJOA(S) - VYWIND ZVEL = TRAJOA(T) - VZWIND  C DAVEL = SQRT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C C C C C C C C C C C C C C C C C C C		C*************	*********	**********	*********	********	*********	••••	
C XVEL = TRAUDA(S) - VXWIND YVEL = TRAUDA(S) - VYWIND YVEL = TRAUDA(S) - VYWIND ZVEL = TRAUDA(S) - VYWIND C DAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL) C OMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR VARIABLES C C COMPUTE ANGULAR VARIABLES C C C C C C C C C C C C C C C C C C C		C COMPUTE RESUL	TANT VELOC	ITY IN DAC	S (SAME AS	EFCS)		•	
C XVEL = TRAJOA(5) - VXWIND YVEL = TRAJOA(6) - VYWIND ZVEL = TRAJOA(7) - VZWIND C OAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL) C COMPUTE ANGULAR VARIABLES C C C C C C C C C C C C C C C C C C C							***	• • • • •	
C XVEL = TRAJOA(5) - VXWIND YVEL = TRAJOA(6) - VYWIND ZVEL = TRAJOA(7) - VZWIND C DAVEL = SQRT(XVEL + XVEL + YVEL + ZVEL + ZVEL) C OAVEL = SQRT(XVEL + XVEL + YVEL + YVEL + ZVEL + ZVEL) C COMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR VARIABLES C COMPUTE ANGULAR VARIABLES C C C C C C C C C C C C C C C C C C C								•	
XVEL = TRAJOA(5) - VXWIND YVEL = TRAJOA(6) - VYWIND ZVEL = TRAJOA(7) - VZWIND C G GAVEL = SGRT(XVEL + XVEL + YVEL + ZVEL + ZVEL) C		U							
YVEL = TRAUDA(6) - VYWIND  ZVEL = TRAUDA(7) - VZWIND  ZVEL = TRAUDA(7) - VZWIND  C DAVEL = SQRT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C COMPUTE ANGULAR VARIABLES  C***********************************	_		A.IDA(S)	CNIDAY					
YVEL = TRAUDALD) - VYWIND  ZVEL = TRAUDA(7) - VZWIND  C  DAVEL = SORT(XVEL + XVEL + YVEL + ZVEL + ZVEL)  C. COMPUTE ANGULAR VARIABLES  C. COMPUTE ANGULAR VA									
ZVEL = TRAUDA(7) - VZWIND  C		н		ON I M A					
C				ONINZA					
DAVEL = SORT(XVEL * XVEL + YVEL + ZVEL)  C. COMPUTE ANGULAR VARIABLES  C. COMPUTE ANGULAR VARIAB									
C		OAVEL = S	ORT (XVEL +	XVEL + YVI	EL . YVEL	F ZVEL +	ZVEL)		
C COMPUTE ANGULAR VARIABLES  C***********************************	ıe			*********	********	******	***********	• • • • • • • • • • • • • • • • • • • •	
C. C	,	THOMAS STREET	AD VADIABL		•			•	
SIN2 = ZVEL/OAVEL  OAALPH = ASIN(SIN2)  COS2 = COS(OAALPH)  OABETA = ZARCTAN(YVEL, XVEL)		C COMPOSE ANGOLD	104144						
SINZ = OAALPH COS2 = OABETA		******	*******	*******		****			
0AALPH COS2 = 0ABETA		SIN2 - ZVI	EL/OAVEL						
COS2 = COABETA		101440	TO THE CALL						
COS2 = OABETA		CAALTI	CANTE INTE						
DABETA = ZARCTAN(YVEL,XVEL)	^	C052 = C03	S(OAALPH)						
			ZARCTAN(YV	FI XVEL)					

SUBROUTINE AERFMOA	AERFMOA	14/74	74/74 OPT=1	FTN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE	15
	C COMPUTE /		SERODYNAMIC COEFFICIENTS		:•:			
175	C USE EFFEC	CTIVE DRA	STIVE DRAG AREA PARAMETER TO INCORPORATE CONSTANT DRAG	ONSTANT DRAG				
180	CXOA		CXDASIGN((CDS2*CDS(DABETA)),TRAUDA(5)) CYDASIGN((CDS2*SIN(DABETA)),TRAUDA(6)) CZDASIGN((SIN2),TRAUDA(7))					
	C EXTRACT	<b>~</b> • •	ACT AERODYNAMIC INFORMATION  CANACH - DAVEL / 449 0010 4 TEMPS 4. 0 5)		* •			
185	C COMPUTE F	FORCES FO	C COMPUTE FORCES FOR OCCUPANT ALONE IN DACS		* * :			
061		ORC * 5 OA * AERF OA * AERF OA * AERF	AERFORC * .5 * RHOS * AREADA * DAVEL * DAVEL FXAEDA * AERFORC * CXOA FYAEDA * AERFORC * CYDA FZAEDA * AERFORC * CZOA GOTO 500					
961	C C 100 IERRFLG =	FLG . 1						
200	500 CDNT INUE RETURN END	INUE						

**9** .

ON THE AERDOYAMIC COEFFICIENTS DEAD COMPUTE THE PROCESS AND MOMENTS ARE FOUND BY INTERPOLATING IN THE REPOYAMIC COEFFICIENTS TRALES WHICH WERE RAD IN AND STORED BY SUBROUTINE AERDIN DUBING PROGRAM INTIALIZATION  C COMMUNICATIONS C CALLED BY: C COMMON YOR BY C COMMON YOU BY C COMMON YOR BY C COMMON YOR BY C COMMON YOR BY C COMMON YOU BY C COMMON BY C COMMON YOU BY C		SEAT AFTER SEAT/OCCUPANT SEPARATION SODYNAMIC COEFFICIENTS USED TO COMPUTE TH AND MOMENTS ARE FOUND BY INTERPOLATING I SODYNAMIC COEFFICIENTS TABLES WHICH WERE N AND STORED BY SUBROUTINE AEROIN DURING A INITIALIZATION.  BROTATE, ZARCTAN DEFINED:  INTS OF WIND VELOCITY IN SEAT COORDINATE  INTS OF SEAT ALONE VELOCITY MINUS WIND VEL.  INT VELOCITY OF SEAT ALONE MINUS WIND VEL.
FORCES AND MOMENTS ARE FOUND BY INTERPOLATING IN THE AFRODYAMAN COFFICIENTS TRAILES WHICH WERE THE AFRONYAMIC COFFICIENTS TRAILES WHICH WERE THE AFRONYAMIC COFFICIENTS TRAILES WHICH WERE TEAD IN MAD STORED BY SURBOUTINE AFROIN DUBING CALLED BY: CALLED B		AND MOMENTS ARE FOUND BY INTERPOLATING TO THE AND MOMENTS ARE FOUND BY INTERPOLATING TO THE AND STORED BY SUBROUTINE AERDIN DURING A INITIALIZATION.  ROTATE, ZARCTAN  BEFINED:  INTS OF WIND VELOCITY IN SEAT COORDINATE  INTS OF SEAT ALONE VELOCITY MINUS WIND VELOF ATTACK IN RADIANS  FOR ATTACK IN DEGREES  OF STORESLIP IN DEGREES  OF STORESLIP IN DEGREES  OF STORESLIP IN DEGREES  WOF SOUND IN FEET/SECOND
<b>∑</b>		A INITIALIZATION.  ROTATE, ZARCTAN  DEFINED:  INTS OF WIND VELOCITY IN SEAT COORDINATE  INT VELOCITY OF SEAT ALONE WINUS WIND VEL  DE ATTACK IN RADIANS  F ATTACK IN DEGREES  OF SIDESLIP IN DEGREES  OF SIDESLIP IN DEGREES  OF SOUND IN FEET/SECOND
CALED BY:  CALLS:  CANDONENTS OF WIND VELOCITY IN SEAT COORDINATE SYSTEM VAWIND - COMPONENTS OF WIND VELOCITY MINUS WIND VELOCITY ZVEL - COMPONENTS OF ATTACK IN RADIANS  CALVAIND - COMPONENTS OF SEAT ALONE WINUS WIND VELOCITY ZVEL - COMPONENTS OF ATTACK IN RADIANS  CALVAIND - COMPONENTS OF SEAT ALONE WINUS WIND VELOCITY ZVEL - COMPONENTS OF STATEM IN RADIANS  CALVAIND - VACIOTITY OF SCALM IN RADIANS  CALVAIND - VACIOTITY OF SCALM IN REPEASE  CALVAIND - VACIOTITY OF SCALM IN SCALM		NOTATE, ZARCTAN DEFINED: INTS OF WIND VELOCITY IN SEAT COORDINATE INTS OF SEAT ALONE VELOCITY MINUS WIND VE. NOT VELOCITY OF SEAT ALONE MINUS WIND VELOF ATTACK IN BEGREES SOF ATTACK IN DEGREES OF STORSLIP IN DEGREES WIND SOUND IN FEET/SECOND
CALLS:  CALLS:  INTRP. ROTATE, ZARCTAN  C NON-COMMON VARIABLES DEFINED:  C VVAIND - COMPONENTS OF WIND VELOCITY IN SEAT COORDINATE SYSTEM  C VVAIND - COMPONENTS OF SEAT ALONE WINUS WIND VELOCITY  Z VEL - COMPONENTS OF SEAT ALONE WINUS WIND VELOCITY  Z VEL - COMPONENTS OF ATTACK IN RADIANS  C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY  Z VEL - CALPANS - ANGLE OF ATTACK IN RADIANS  C ALPHAS - ANGLE OF ATTACK IN BOGRES  C ALPHA - ANGLE OF ATTACK IN BOGRES  C ANGLE - ARRODOVNAMIC COEFFICIENTS  C CNSA - C C C C C C C C C C C C C C C C C C		ROTATE, ZARCTAN DEFINED: INTS OF WIND VELOCITY IN SEAT COORDINATE INT VELOCITY OF SEAT ALONE WINDS WIND VEL NT VELOCITY OF SEAT ALONE MINUS WIND VEL OF ATTACK IN BEGREES I OF SIDESLIP IN DEGREES I OF SIDESLIP IN DEGREES I OF SOUND IN FEET/SECOND
CALLS:  CALLS:  CALLS:  CONN-COMMON VARIABLES DEFINED:  COMMON /CONSTANT CALLS DEFINED:  COMMON /CONSTANT CALLS DEFINED:  CAVEL - COMPONENTS OF WIND VELOCITY IN SEAT COORDINATE SYSTEM VAWIND - COMPONENTS OF SEAT ALONE WINDS WIND VELOCITY ZVEL - CALLS DESTANT OF SEAT ALONE WINDS WIND VELOCITY OF ZVEL - CALLS DESTANT OF SEAT ALONE WINDS WIND VELOCITY OF SALPHA - ANGLE OF SIDESLIP IN DEGREES SABETA - ANGLE OF SIDESLIP IN DEGREES CALS A LONG OF SEAT ALONE CALS A LONG OF SOUND IN FEET/SECOND CALS A LONG OF SOUND OF SOUND IN FEET/SECOND CALS A LONG OF SOUND OF		ROTATE, ZARCTAN DEFINED: INTS OF WIND VELOCITY IN SEAT COORDINATE INTS OF SEAT ALONE VELOCITY MINUS WIND VE. INT VELOCITY OF SEAT ALONE MINUS WIND VEL. OF ATTACK IN BEGREES S OF SIDESLIP IN DEGREES S OF SIDESLIP IN DEGREES MARER
C VVVIND - COMPONENTS OF WIND VELOCITY IN SEAT COORDINATE SYSTEM VVAIND - COMPONENTS OF WIND VELOCITY MINUS WIND VELOCITY ZVEL - COMPONENTS OF SEAT ALONE MINUS WIND VELOCITY ZVEL - COMPONENTS OF SEAT ALONE MINUS WIND VELOCITY ZVEL - CAPTACK IN RADIANS C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY ZVEL - ANGLE OF ATTACK IN PEGREES SABETA - ANGLE OF ATTACK IN DEGREES SABETA - ANGLE OF SIDESLIP IN DEGREES SABETA - ANGLE OF SIDESLIP IN DEGREES SABETA - ANGLE OF SIDESLIP IN DEGREES C CXSA CXSA CXSA CXSA CXSA CXSA CXSA C		DEFINED:  INTS OF WIND VELOCITY IN SEAT COORDINATE  INTS OF SEAT ALONE VELOCITY MINUS WIND VE.  INT VELOCITY OF SEAT ALONE MINUS WIND VEL.
C VVAIND -  C VVAIND -  C VVAIND -  C XVEL -		- COMPONENTS OF WIND VELOCITY IN SEAT COORDINATE - COMPONENTS OF SEAT ALONE VELOCITY MINUS WIND VE RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VEL ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SOUND IN FEET/SECOND - MACH NUMBER
C XVEL - COMPONENTS OF SEAT ALONE VELOCITY MINUS WIND VELOCITY C ZVEL - COMPONENTS OF SEAT ALONE WINUS WIND VELOCITY C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY C ALPHAS - ANGLE OF ATTACK IN BEGRES C SARETA - ANGLE OF ATTACK IN DEGREES C SARETA - ANGLE OF SOUND IN FEET/SECOND C WACHIS - MACH NUMBER C CXSA - CXSA	•	- COMPONENTS OF SEAT ALONE VELOCITY MINUS WIND VE RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VEL ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SOUND IN FEET/SECOND
C XVEL -  C YVEL -  C VUEL -  C C VUEL -  C C C C C C C C C C C C C C C C C C		- COMPONENTS OF SEAT ALONE VELOCITY MINUS - RESULTANT VELOCITY OF SEAT ALONE MINUS W - ANGLE OF ATTACK IN DEGREES - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SOUND IN FEET/SECOND - MACH NUMBER
C VVEL - COMPONENTS OF SEAT ALONE VELOCITY MINUS WIND VELOCITY  ZVEL - CLUEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY  C LUEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELOCITY  C ALPHAS - ANGLE OF ATTACK IN BEGREES  C SABETA - ANGLE OF ATTACK IN DEGREES  C SABETA - ANGLE OF ATTACK IN DEGREES  C SABETA - ANGLE OF SIDESLIP IN DEGREES  C CXSA - CCXA - CXA -		- COMPONENTS OF SEAT ALONE VELOCITY MINUS - RESULTANT VELOCITY OF SEAT ALONE MINUS W - ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SOUND IN FEET/SECOND - MACH NUMBER
C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELDCITY C ALPHAS - ANGLE OF ATTACK IN RADIANS C ALPHA - ANGLE OF ATTACK IN DEGREES C SARETA - ANGLE OF SIDES. IN DEGREES C SARETA - ANGLE OF SOUND IN FEET/SECOND C MACHS - MACH NUMBER C CYSA C CYSA C CYSA C CASA -		- RESULTANT VELOCITY OF SEAT ALONE - ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES TA - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SQUND IN FEET/SECOND - MACH NUMBER
C LVEL - RESULTANT VELOCITY OF SEAT ALONE MINUS WIND VELDCITY C ALPHAS - ANGLE OF ATTACK IN BEREES C SAERA - ANGLE OF SIDES.IP IN DEGREES C SAERA - ANGLE OF SOUND IN FEET/SECOND C MACHS - MACH NUMBER C CYSA C CYSA C CYSA C CASA - CAS		- RESULTANT VELOCITY OF SEAT ALONE - ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES TA - ANGLE OF SIDESLIP IN DEGREES - VELOCITY OF SOUND IN FEET/SECOND - MACH NUMBER
C ALPHAS - ANGLE OF ATTACK IN RADIANS C ALPHA - ANGLE OF ATTACK IN DEGREES C SABETA - ANGLE OF SIDESLIP IN DEGREES C SABETA - ANGLE OF SIDESLIP IN DEGREES C VSOUND - VELCITY OF SOUND IN FEET/SECOND C CXSA		- ANGLE OF ATTACK IN RADIANS - ANGLE OF ATTACK IN DEGREES TA - ANGLE OF SIDESLIP IN DEGREES - VELDCITY OF SQUND IN FEET/SECOND - MACH NUMBER
C SABETA - ANGLE OF SIDESLIP IN DEGREES C SABETA - ANGLE OF SIDESLIP IN DEGREES C VSGUND - VELDCITY OF SGUND IN FEET/SECOND C CXSA - CX	o i	- ANGLE OF ATT TA - ANGLE OF S - VELOCITY OF - MACH NUMBER
C SABETA - ANGLE OF SIDESLIP IN DEGREES C VSOUND - VELOCITY OF SOUND IN FEET/SECOND C MACHS - MACH NUMBER C CXSA C	•	TA - ANGLE OF S - VELOCITY OF - MACH NUMBER
C CASA - C C		- MACH NUMBER
C CXSA - C CXXA - C C		
C CXSA - C C		
C CZSA - C CSA - C CSA - C CSA - C CSA - C CNSA - C COMPANIC FORCE ACTING ON THE SEAT ALONE C POTENTIAL ERROR CONDITIONS: C COFFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND THE RUN IS TERMINATED. C COFFICIENTS (USED IN SUBROUTINE AFROIN) COMMON BLOCK C COMMON /COFF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C DENSITY COMMON BLOCK C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI	U (	CXSA
C CISA - AERODYNAMIC COEFFICIENTS C CMSA - CNSA - C CNSA - C CNSA - C CNSA - C CNSI - C C CNSI - C CNSI - C CNSI - C C C C C C C C C C C C C C C C C C	<b>.</b> .	CYSA -
C CMSA - C CNSA - C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SEAT ALONE C POTENTIAL ERROR CONDITIONS: IF SAALPH, SABETA, OR SAMACH IS OUTSIDE THE AERODYNAMIC C COEFFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND C COEFFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND C C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COMMON /COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG DEGRAD C C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C	ט ני	- AFRODYNAMIC
C CNSA  C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SEAT ALONE C POTENTIAL ERROR CONDITIONS: IF SAALPH, SABETA, OR SAMACH IS OUTSIDE THE AERODYNAMIC C COEFFICIENTS TEAMINATED. C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD C C COMMON BLOCK C C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C	Ų	
C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SEAT ALONE C POTENTIAL ERROR CONDITIONS: C COEFFICIENTS TABLE LIMITS, A MESSAGE IS DUTPUT, AND C COEFFICIENTS TERMINATED. C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COEFFICIENTS COMMON BLOCK C COMMON /COEF / CDEF(700,6) C COMMON /CONSTAT / GRAVITY , RADDEG DEGRAD PI	υ i	CNSA -
C POTENTIAL ERROR CONDITIONS: C IF SALPH, SABETA, DR SAMACH IS OUTSIDE THE AERDOYNAMIC C COEFFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND C C COEFFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND C C COEFFICIENTS (USED IN SUBROUTINE AERDIN) COMMON BLOCK C COMMON / COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C C COMMON / CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C C C C C C C C C C C C C C C C C C C		- TOTAL AERODYNAMIC FORCE ACTING ON THE SEAT
C COEFICIENTS TABLE LIMITS, A MESSAGE IS OUTPUT, AND C THE RUN IS TERMINATED. C COEFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COMMON /COEF / CDEF(700,6) C COMMON /COMMON BLOCK C COMMON /CONSTANTS COMMON BLOCK C COMMON /CONSTANTS COMMON BLOCK C COMSTANTS COMMON BLOCK C COMMON /CONSTANTS COMMON BLOCK C COMMON /CONSTANTS COMMON BLOCK C COMMON /CONSTANTS COMMON BLOCK C COMMON BLOCK C COMMON BLOCK C COMMON BLOCK C C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C		
C COEFICIENTS TABLE LIMITS, A MESSAGE IS DUIPUT, AND C C.C. THE RUN IS TERMINATED. C COEFICIENTS (USED IN SUBROUTINE AFROIN) COMMON BLOCK C COMMON /COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG DEGRAD C COMMON /CONSTANT / GRAVITY RADDEG DEGRAD C COMMON BLOCK C C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C	U ·	OR SAMACH IS OUTSIDE
C COEFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COMMON /COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMSTANTS COMMON BLOCK	ψį	LIMITS, A MESSAGE IS
C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK C COMMON /COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG DEGRAD PI	:	
C COEFFICIENTS (USED IN SUBROUTINE AERDIN) COMMON BLOCK COMMON /COEF / CDEF(700,6) C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY , RADDEG , DEGRAD , PI C DENSITY COMMON BLOCK	0	
C CONSTANTS COMMON BLOCK C COMON /CONSTANT / GRAVITY RADDEG DEGRAD C DENSITY COMMON BLOCK	C COEFFIG	CIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C		
C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG DEGRAD PI C DENSITY COMMON BLOCK		AMON / COEr / COEr(/OC.6)
	C CONSTAR	VIS COMMON BLOCK
	Comment	•••••••
	Č)	
******************************	C DENSITY	
	C	*************

FYMESA FZZOVEL WINDZ NTAIL YTAIL YN YAN YAN YAN	TEMPS   VAWIND   VAWIND   VAWIND	CM I MZ/	X Y POS Y POS Y Y POS Y Y POS Y Y A W Y Y W Y Y W Y Y W Y Y Y W Y Y Y Y	NC2S(12) I AERCSO(12) I RESTRT, IUNITS .	XGGSA YGGSA   1 Y S A   1	CMSA(3,3) . CMTE(3,3) . CMSR(3,3) .	LINECT(31) IPRTCNT(31) MAXREPT MAXEVNT 1ERRELG U HEADALT HEADVEL HEADYAW HEADPIT HEADYAW HEADPIT HEADYAW HEADFIT THEADYAW TIME (31)
	NAMON BLOCK  AIRCRI / TEMP .  AIRCRI / TSTART .  INCOA / NCXS(12)  NFOOA / NCXS(12)  NFOOA / NCXS(12)  NFOOA / NCXS(12)  NFOOA / NCXS(12)  AIRCRI / TSTART .  ISCAN / XPOSSRP .  ESTOP .  INCOA / NCXS(12)  INCOA / NCXS	VYWIND	PRESSUR, ZACVEL. XTAIL, YTAIL, RULL, RVEL. WINDY, WINDZ, NPTSAAT, AAT(4,50)	2) , ROPC(6, 12) 2) , ENDPC(6, 12) 15TOP , ESTOP , 15GSEP , IPLOT , IPHASE2, IPHASE3	YPDSSRP, ZPOSSRP, IXXSA IXXSA IXXSA HKITSA HGHISA WGHISA XPOSSCS, YPOSSCS, IXXSA IXXSA	3) DCMRA(3,3) D 3) DCMRS(3,3) D 1,3) DCMGAE(3,3), D	1)

•	REPLYPE	. BIAS	BIAS	. PRTLNGT
VICE COMMON SAME	PRIWGHI PRTEMP	PRTMASS	PRTMASS .	. PRTINDX
C MUMARMS CUMMON BLUCK				
COMMON /MOMARMS / +REFLNSA .URX(6)	.REFLNSA	. URX(6)	, URY (6)	,UR2(6)
<u>~</u>	), ZSSOCA(2)	.XSSORK(6).	YSSORK (6	), ZSSORK(6),
*XSSUKKE . TSSUKKE	25SUKKE	XSSOLKE ,	YSSOBOT	7550R01
9	. YSSOSB(6), ZSSOSB(6), XRRCSAC		YRRCSAC	ZRRCSAC
+XSSCSAC , YSSCSAC	ZSSCSAC		, Y S SOSRP	. ZSSOSRP .
+ +x< <acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x&lt;<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre>x<acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre></acpre>	ZSSASAP	XRRDAP(2), YRRDAP(2)	YRRDAP(2	
9	), ZRRSB0(6)	XSSOCP(2)	YSSOCP (2	), ZSSOCP(2),
+XSSDAP(2), YSSDAP(2), ZSSDAP(2), XESOAC	), ZSSDAP(2)	, XESOAC	, YESOAC	, ZESDAC .
+XSRCSAC YSRCSAC	ZSRCSAC		YSSOAC	ZSSOAC .
	ZRSOSB	<b>-</b>	, YRRSBOT	. 2RRSB01
	ZRRSB	3)	YSSOCH(3	), 2SSOCH(3),
	ZAACSD	. XASDAC	. YASOAC	ZASDAC .
+XRSDAC , YRSOAC , ZRSDAC		, XSCPAP(2), YSCPAP(2), ZSCPAP(2)	. YSCPAP(2).Z	).ZSCPAP(2)
:			• • • • • • • • • • • • • • • • • • • •	************
CUMMUN / KKU!IA /	11ME , 11MES TDA.ISA(193)	5 . DELIA! TPA:IDA(193)	•	TRAUSU(193)
. •	TRA.IAC (193)	•		OUATS0(65)
•	QUATSA(65)		•	QUATAC(65)
+	INISTP	. IPCPASS	•	IRKPASS
•	IPOINTS	۲۸۱ .	•	IYPRX
•	1KX	. IKSUMX	•	IKPASSX
+	XIAI	YIIX	•	IVI2X
•	1V13X	IYPRIX	•	IYPRI 1X
<b>+</b> •	IYPRI2X ICVIX	XIYAI .	•	PYLIX
**************************************		×		
C TORQUE SEAT ALONE COMMON BLOCK	ON BLOCK			
Cassassessessessessessessessessessessesse	***********	**********		*****
TOUTE . TOUTIE / TOUTE / TOUTE OF THE PROPERTY		:		************
C AERODYNAMICS INFORMATION COMMON BLOCK	ON COMMON B			
COMMON / AEROCES /	OAAL PH	OABETA		DAMACH
		SABETA	SAVEL	SAMACH
•	SOALPH ,	SOBETA	SOVEL .	SOMACH
•	CXOA , CYDA	•	CLOA	CMOA CNDA
•	•	-	. CLSA	•
•	CXSO , CYSO	0520 . 05	. CL SO	CMSO CNSO

```
PAGE
09,41,53
 83/11/07
                                                                                                                                                                                                                                                                                                               C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF(SAMACH .LE. 1.2) GDTD 10
AVEL = SORT(TRAJSA(11) + TRAJSA(11) + TRAJSA(12) + TRAJSA(12) +
 FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DO 20 1 = 2.6.2
CALL INTRP(COEF(1,1), MCXS(I), NCYS(I), NCZS(I), DLTC(1,1),
+FNDPC(1,1), 2.5A&LPH, ABS(SABETA), SAMACH, COF(I), IFAIL)
IF(IFAIL, NE, O) GOTO 50
IF(ISABETA, I, O, O) COF(I) = -COF(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALL INTRP(COFF(+,1), NCXS(1), NCYS(1), NCZS(1), DLTC(1,1).
*EMDPC(1,1),2.SAALPH, ABS(SABETA), SAMACH, CDF(1), IFAIL)
IF(IFAIL NE 0) GOTO 50
                                                                                                                                                                                                                                                                        SAVEL = SORT(XVEL + XVEL + YVEL + YVEL + ZVEL + ZVEL)
                                                                                                                                                                                                                                                                                                                                                                                       SAALPH = -ZARCTAN(ZVEL,XVEL)
IF(SAALPH.LT.O.O) SAALPH=SAALPH+6.2831852
SABETA = 0.0
SABETA = SABETA = ASIN(YVEL / SAVEL)
SAALPH = SAALPH + RADDEG
                                                                                                                                                                    CALL ROTATE (WINDX, VXWIND, ZVECT(1), DCMSAE. 0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VSGUND = 49.0212 • (TEMPS •• 0.5)
IF(IUNITS .EQ O) VSGUND = VSGUND/3.28
SAMACH = SAVEL / VSGUND
                                                                                                                   COMPUTE RESULTANT VELOCITY IN SACS
                                                                                                                                                                                                    XVEL = TRAJSA(S) - VXWIND
YVEL = TRAJSA(G) - VYWIND
ZVEL = TRAJSA(7) - VZWIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +TRAUSA(13) + TRAUSA(13))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SABETA = SABETA + RADDEG
   0PT = 1
                                                 DIMENSION COF (8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DO 30 1 * 1,5,2
                                                                    REAL LACCEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30 CONTINUE
 SUBROUTINE AERFMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç
                                                                                                     175
                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215
                                                                                                                                                                                                                                                                          185
                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       225
```

```
CYSA = COF(2)
CZSA = COF(3)
CLSA = COF(4)
CMSA = COF(5)
CMSA = COF(6)
CDF(1)
```

235

C COMPUTE FURCES AND MUMENTS FOR SEAT ALONE AERFORC = 5 . RHOS . AREASA . SAVEL . SAVEL FXAESA = AERFORC + CXSA FYAESA = AERFORC + CYSA FZAESA = AERFORC + CZSA

240

245

250

TLAESA = AERFORC + ((YSSASRP + CZSA - ZSSASRP + CYSA) + TMAESA . AERFORC . ((ZSSASRP . CXSA . XSSASRP . CZSA) · CXSA) INAFSA = AERFORC + ((XSSASRP + CYSA - YSSASRP +REFLNSA . CLSA) +REFLNSA . CMSA) Ç

+REFLNSA + CNSA)

DG 35 I 411, 13 TRAJSA(1) = TRAJSA(1) + DMPGF3 35 CONTINUE

260

40 FORMAT(IX,//72(1H+)/,4X,"WARNING(SUBROUTINE AERFMSA)+++ "X,"CALCULATED MACH NUMBER IS GREATER THAN ALLDWED",/+5X,"MACH NUMBER OF 1.2 WILL BE USED INSTEAD",/+5X,"TIME = "F10.4.2X,"MACH NUMBER = "F10.4.2X,"+10.4.2X,"MACH NUMBER = "F10.4.2X,"+10.4.2X,"ANGULAR VELOCITY = "F10.4.2X,"ANGULAR VELOCITY = "F10.4.2X,"ANGULAR ACCELERATION = "F10.4.2X," 6010 500

265

+F10.4)

SOO CONTINUE 285

2.1

PAGE

METHOD SHEARDONAMIC COEFFICIENTS USED TO COMPONENTS OF THE AERODYNAMIC COEFFICIENTS THERPOLY FORCES AND MOMENTS ARE FOUND BY INFERDOL FROGRAM INITIALIZATION. AFRODYNAMIC FOR READ IN AND STORED BY SUBROUTINE AEROIN PROGRAM INITIALIZATION. AFRODYNAMIC FOR ADMINISTED TO REFLECT PARTIAL OF THE SEAT/OCCUPANT COMBINATION AS IT E OF THE SEAT/OCCUPANT COMBINATION AS IT E SEATOCC CALLS:  INTRP. ROITER: ZAPCTAN.  CALLS:  COMBINATION WHEN FULLY EXPOSED TO THE AIRSTREAM.  CALLS:  CASO:
FORCES AND MONIS SER FOUND BY INTERPOL  FORCES AND MONIS SER FOUND BY INTERPOL  READ IN AND STORED BY SUBROUTINE AEROIN  READ IN AND STORED BY SUBROUTINE AEROIN  READ IN AND STORED BY SUBROUTINE AEROIN  THE SEAT/OCCUPANT COMBINATION AS IT E  OF THE SEAT/OCCUPANT COMBINATION AS IT E  CALLES  INTRP, ROIATE, ZAPCTAN  CANDINO  CAVAIND  COMBINATION WHEN FULLY EXPOSUED TO THE SEAT/OCCUPANT  CAVAIND  CAV
PROGRAM INITIALIZATION. AERODINAMIC FOR MOMENTS ARE ADJUSTED TO RELECT PARTIAL OF THE SEAT/OCCUPANT COMBINATION AS IT E THE AIRSTREAM.  C CALLS: C CALLS: C CALLS: INTRP. ROIATE, ZARCTAN C NON-COMMON VARIABLES DEFINED: VXWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR VXWIND - COMPONENTS OF SEAT/OCCUPANT VELOCITY MIN ZVEL - COMPONENTS OF SEAT/OCCUPANT WIND C VXWIND - SYSTEM C XVEL - COMPONENTS OF SEAT/OCCUPANT WIND C VXWIND - SYSTEM C XVEL - WIND VELOCITY OF SOUND IN FEET/SECOND C XVEL - MOGLE OF ATTACK IN BEGRES C ALPHA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF SOUND IN FEET/SECOND C XVSOUND - VELOCITY OF SOUND IN FEET/SECOND C XSOUND - VELOCITY OF SOUND IN FEET/SECOND C ALPHA - ANGLE OF SOUND IN FEET/SECOND C REPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C CXSO - CONSITION OF THE SEAT/OCCUPANT C CXSO - CONSITION OF THE SEAT/OCCUPANT C CXSO - CONSITION WHEN FULLY EXPOSED TO THE AI C CXSO - CCSO - COMBINATION WHEN FULLY EXPOSED TO THE SEAT/OCCUPANT C CXSO - CCSO
MOMENTS ARE ADJUSTED TO REFLECT PARTIAL  C CALLED BY:  C CALLS: INTRP. ROTATE, ZAPCTAN  C VYWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  VYWIND - COMPONENTS OF WIND VELOCITY WIN  C VYWIND - COMPONENTS OF SEAT/OCCUPANT WINL  VYEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY WIN  C VYWIND - SYSTEM  C VYWIND - ANGLE OF STEAK IN PROLINS  C LVEL - RESULTANT VELOCITY OF SEAT/OCCUPANT MINL  C LVEL - RESULTANT VELOCITY  C ALPHA - ANGLE OF STIDESLIP  C VSOUND - VELOCITY  C ALPHA - ANGLE OF STIDESLIP  C VSOUND - VELOCITY OF SOUND IN FEET/SECOND  MACHS - MACH NUMBER  C SOBETA - ANGLE OF SOUND IN FEET/SECOND  MACHS - MACH NUMBER  C SOBETA - ANGLE OF SOUND IN FEET/SECOND  C CONDON - VELOCITY OF SOUND IN FEET/SECOND  C COMBINATION OF THE SEAT/OCCUPANT  C CASO - REPOSED TO THE ARBSTREAM  C CASO - CASO - COMBINATION WHEN FULLY EXPOSED TO THE AI  C CASO -
THE AFRIREAM.  C COMMUNICATIONS -  C CALLED BY:  C CALLES SEATOCC  C CALLES BY:  C CALLES BY:  INTRP. ROTATE, ZAPCTAN  C CALLED BY:  C CALLS:  INTRP. ROTATE, ZAPCTAN  C VAWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  VAWIND - SYSTEM  C ARCHIOLITY OF SEAT/OCCUPANT MINU  C C SOURD - VELOCITY  C ARCHIOLITY OF SEAT/OCCUPANT  C ARCHIOLITY
CALLED BY:  CALLED BY:  CALLED BY:  CALLES:  INTRP, ROTATE, ZAFCTAN  C NON-COMMON VARIABLES DEFINED:  VYWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  VYWIND - COMPONENTS OF SEAT/OCCUPANT VELOCITY MINU  C XVEL - WIND VELOCITY  C XVEL - ANGLE OF ATTACK IN DEGREES  C XSOUND - VELOCITY  C XVEL - ANGLE OF ATTACK IN DEGREES  C XSOUND - VELOCITY  C XVEL - ANGLE OF ATTACK IN DEGREES  C XVEL - ANGLE OF ATTACK IN DEGREES  C XVEL - WIND VELOCITY  C XVEL - WIND VELOC
SEATOCC CALLS: INTRP, ROTATE, ZAPCTAN C CALLS: INTRP, ROTATE, ZAPCTAN C NON-COMMON VARIABLES DEFINED: VVAVIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR VZWIND - SYSTEM C VYWIND - SYSTEM C XVEL - WIND VELOCITY OF SEAT/OCCUPANT WINL XVEL - WIND VELOCITY C LVEL - RESULTANT VELOCITY OF SEAT/OCCUPANT MINL WIND VELOCITY C ALPHA - ANGLE OF ATTACK IN BOIGNES SOBETA - ANGLE OF SIDESLIP C VSOUND - VELOCITY OF SOUND IN FEET/SECOND C MACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C CASO - COMBINATION WHEN FULLY EXPOSED TO THE AI C CXSO - CCSO - C
CALLS: INTRP, ROTATE, ZARCTAN C NON-COMMON VARIABLES DEFINED: C VXWIND - C VYWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR C VYWIND - SYSTEM C VYWIND - COMPONENTS OF WIND VELOCITY WIND ZVEL - WIND VELOCITY C YVEL - WIND VELOCITY C LVEL - RESULTANT VELOCITY OF SEAT/OCCUPANT MINU C LVEL - MIND VELOCITY C ALPHA - ANGLE OF ATTACK IN RADIANS C SOBETA - ANGLE OF SIDESLIP C SOBETA - ANGLE OF SIDESLIP C VSOUND - VELOCITY OF SOUND IN FEET/SECOND C WACHS - MACH NUMBER C SOBETA - ANGLE OF ATTACK IN BEGRES C SOBETA - ANGLE OF ATTACK OF SOUND IN FEET/SECOND C C SOBETA - ANGLE OF ATTACK OF SOUND IN FEET/SECOND C NACHS - MACH NUMBER C SOBETA - ANGLE OF ATTACK OF THE SEAT/OCCUPANT C C C SOBETA - ANGLE OF ATTACK OF THE SEAT/OCCUPANT C C C SOBETA - ANGLE OF SIDESLIP C C C SOSTITION OF THE SEAT/OCCUPANT C C SOSTITION OF THE SEAT/OCCUPANT C C C SOSTITION OF THE SEAT/OCCUPANT C C C SOSTITION OF THE SEAT/OCCUPANT C SOSTITION OF THE SOSTITION OF THE SEAT/OCCUPANT C SOSTITION OF THE SEAT/OCCUP
C CALLS:  C CALLS:  C NON-COMMON VARIABLES DEFINED:  VXWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  VXWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  VXWIND - SYSTEM  C XVEL - WIND VELOCITY  C LVEL - RESULTANT VELOCITY OF SEAT/OCCUPANT WINU  C LVEL - MAIND VELOCITY  C ALPHA - ANGLE OF ATTACK IN DEGREES  C ALPHA - ANGLE OF ATTACK IN BEOREES  C ALPHA - ANGLE OF ATTACK IN BEORGE  C ALPHA - ANGLE OF ATTACK IN SOMACH IS OUTSIDE  C CNSO - CCSO - COFFICIENTS  C CNSO - COFFICIENTS TABLE LIMITS, A MESSAGE IS  C CNSO - THE RUN IS TERMINATED  C CNSO - THE RUN IS
COMMON VARIABLES DEFINED:  CNON-COMMON VARIABLES DEFINED:  CNAVIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR  CNAVEL - SYSTEM  CNAVEL - WIND VELOCITY  CLVEL - RESULTANT VELOCITY OF SEAT/OCCUPANT WIND  CLVEL - RESULTANT VELOCITY  CALPHA - ANGLE OF ATTACK IN RADIANS  CALPHA - ANGLE OF ATTACK IN RADIANS  CALPHA - ANGLE OF SIDESLIP  VSOUND - VELOCITY OF SOUND IN FEET/SECOND  NACHS - MACH NUMBER  CRADSED - FRACHIONAL PORTION OF THE SEAT/OCCUPANT  CRADSED - FRACHIONAL PORTION OF THE SEAT/OCCUPANT  CASO - REFLECT PARTIAL EXPOSURE OF THE SEAT/OCCUPANT  CASO - COMBINATION WHEN FULLY EXPOSED TO THE AI  CXSO - CCSO - COMBINATION WHEN FULLY EXPOSED TO THE AI  CXSO - CCSO - COMBINATIONS:  CRASO - CCSO - COMBINATIONS:  CASO - CCSO - COMBINATIONS:  THE RUN IS TERMINATED  COSEFICIENTS A MESSAGE IS  THE RUN IS TERMINATED
C VYWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR C VYWIND - COMPONENTS OF WIND VELOCITY IN SEAT COOR C XVEL - SYSTEM C XVEL - WIND VELOCITY C YVEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY C LVEL - RESULTANT VELOCITY C ALPHA - ANGLE OF ATTACK IN DEGREES C ALPHA - ANGLE OF ATTACK IN DEGREES C ALPHA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF SOUND IN FEET/SECOND C VSOUND IN FEET/SECOND C VSOUND IN FEET/SECOND C SOBETA - ANGLE OF SOUND IN FEET/SECOND C SOUND IN FEET/
C XVEL - SYSTEM C XVEL - SYSTEM C XVEL - SYSTEM C XVEL - SYSTEM C XVEL - COMPONENTS OF WIND VELOCITY IN SEAT COOR YVEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY MIN ZVEL - WIND VELOCITY OF SEAT/OCCUPANT WINU C ALPHA - ANGLE OF ATTACK IN RADIANS C ALPHA - ANGLE OF ATTACK IN DEGREES SOBETA - ANGLE OF SIDESLIP C SOBETA - ANGLE OF SIDESLIP C SOBETA - ANGLE OF SIDESLIP C XOUND - VELOCITY OF SOUND IN FEET/SECOND MACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C C APOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C C APOSED - FRACTIONAL EXPOSURE OF THE SEAT/OCCUPANT C C APOSED - TOTAL AERODYNAMIC FORCE ACTING ON THE SE C COMBINATION WHEN FULLY EXPOSED TO THE AI C XSO - C C SO - C SO - C C SO - C SO - C SO - C C SO - C SO
C VZWIND - SYSTEM  C XVEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY MIN  C ZVEL - WIND VELOCITY  C ALPHA - ANGLE OF ATTACK IN BEGRES  C ALPHA - ANGLE OF ATTACK IN BEGRES  C ALPHA - ANGLE OF ATTACK IN BEGRES  C SOBETA - ANGLE OF SIDESLIP  C SOBETA - ANGLE OF ATTACK IN BEGRES  C SOBETA - ANGLE OF ATTACK OF SOUND IN FEET/SECOND  MACH NUMBER  C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT  E REFLECT PARTIAL EXPOSURE OF THE SEAT/OCCUPANT  C C SOBET - COMBINATION WHEN FULLY EXPOSED TO THE AI  C C SO - C C SOBINATION WHEN FULLY EXPOSED TO THE AI  C C SO - C C SO - C C SOBORNAMIC COEFFICIENTS  C C SO - C C SO - C C SOBORNAMIC COEFFICIENTS  C C SO - C C SO - C C SOBORNAMIC COEFFICIENTS  C C SO - C C SO - C C SOBORNAMIC SOMACH IS OUTSIDE  C C SO - C SO - C SO - C C SO - C SO - C C SO - C SO
XVEL -  XVEL -  XVEL -  WIND VELOCITY  C  LVEL - WIND VELOCITY  WIND VELOCITY  WIND VELOCITY  C  ALPHA - ANGLE OF ATTACK IN BEGREES  C  SOBETA - ANGLE OF ATTACK IN BEGREES  C  SOBETA - ANGLE OF SIDESLIP  C  C  C  C  C  C  C  C  C  C  C  C  C
C VVEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY MIN  C LVEL - RESULTANT VELOCITY  C LVEL - RESULTANT VELOCITY  C ALPHA - ANGLE OF ATTACK IN AGORES  C ALPHA - ANGLE OF ATTACK IN DEGREES  C SOBETA - ANGLE OF SIDESLIP  VSOUND - VELOCITY OF SOUND IN FEET/SECOND  C NACHS - MACH NUMBER  C KPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT  E KPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT  C X POSITION OF THE SEAT/OCCUPANT C.G. ADUR  C AEFORC - COTAL AERODYNAMIC CARCE ACTION  C CXSO - COMBINATION WHEN FULLY EXPOSED TO THE AIR  C CXSO - CCSO - THE RUN IS TRRIMATED  C THE RUN IS TERMINATED  C THE RUN IS TERMINATED  C THE RUN IS TERMINATED
C LVEL - COMPONENTS OF SEAT/OCCUPANT VELOCITY MIN  C LVEL - RESULTANT VELOCITY  C ALPHA - ANGLE OF ATTACK IN RADIANS  C ALPHA - ANGLE OF ATTACK IN RADIANS  C ALPHA - ANGLE OF ATTACK IN BEGRES  C SOBETA - ANGLE OF SIDESLIP  C SOBETA - ANGLE OF SIDESLIP  C SOBETA - ANGLE OF SIDESLIP  C SOBETA - ANGLE OF ATTACK IN BEGRES  C RADION OF THE SEAT/OCCUPANT  C A POSITION OF THE SEAT/OCCUPANT  C CASO - COMBINATION WHEN FULLY EXPOSED TO THE AI  C CASO -
C LVEL - RESULTANT VELOCITY C LVEL - RESULTANT VELOCITY C ALPHA - ANGLE OF ATTACK IN BEGREES C SOBETA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF STUDD IN FEET/SECOND C VSOUND - VELOCITY OF SOUND IN FEET/SECOND C NACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z Z POSITION OF THE SEAT/OCCUPANT C C Z POSITION OF THE SEAT/OCCUPANT C. G. ADU C CCSO - COMBINATION WHEN FULLY EXPOSED TO THE AI C CXSO - CCSO
C LVEL - RESULTANT VELOCITY  MIND VELOCITY  C ALPHA - ANGLE OF ATTACK IN BADIANS  C SOBETA - ANGLE OF ATTACK IN DEGREES  C SOBETA - ANGLE OF SIDESLIP  C VSOUND - VELOCITY OF SOUND IN FEET/SECOND  C NACHS - MACH NUMBER  C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT  C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT  C Z POSITION OF IHE SEAT/OCCUPANT C. G. ADULT  C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SE  C CXSO -
C ALPHA - ANGLE OF ATTACK IN RADIANS C ALPHA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF STRACK IN DEGREES C SOBETA - ANGLE OF SOUND IN FEET/SECOND C VSOUND - VELOUTIVE OF SOUND IN FEET/SECOND C NACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C ARPITAL EXPOSURE OF THE SEAT/OCC C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SE C CCSO - C
C ALPHA - ANGLE OF ATTACK IN RADIANS C ALPHA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF SIDESLIP C VSQUIND - VELOUNTY OF SQUIND IN FEET/SECOND C WSQUIND - VELOUTTY OF SQUIND IN FEET/SECOND C MACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z Z DOSITION OF THE SEAT/OCCUPANT C.G. ADUC C REFLOCT PARTIAL EXPOSURE OF THE SEAT/OCC C CXSO - COMBINATION WHEN FULLY EXPOSED TO THE AI C CXSO -
C ALPHA - ANGLE OF ATTACK IN DEGREES C SOBETA - ANGLE OF SIDESLIP C VSOUND - VECUTY OF SOUND IN FEET/SECOND MACHN D - VECUTY OF SOUND IN FEET/SECOND C MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE SEAT/OCCUPANT C AERFORC - TOTAL AERODYNAMIC FORCE ACTING ON THE SE C CXSD - CCXSD
C SOBETA - ANGLE OF SIDESLIP C VSOUND - VELOCITY OF SOUND IN FEET/SECOND C MACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE SEAT/OCCUPANT C REFLECT PARTIAL EXPOSURE OF THE SEAT/OCC C CXSD - COMBINATION WHEN FULLY EXPOSED TO THE AIR C CXSD - C CASO - C C
C KADUND - VELOCITY OF SOUND IN FEET/SECOND MACHS - MACH NUMBER C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE SEAT/OCCUPANT C. G. ADU C REFIECT PARTIAL EXPOSURE OF THE SEAT/OCC C CXSD - COMBINATION WHEN FULLY EXPOSED TO THE SE C CXSD - C CXSD
C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE SEAT/OCCUPANT C. S. ADU. C Z - Z POSITION OF THE SEAT/OCCUPANT C. S. ADU. C REFIECT PARTIAL EXPOSURE OF THE SEAT/OCC C CXSD - COMBINATION WHEN FULLY EXPOSED TO THE AIL C CXSD - CXSO - C
C EXPOSED - FRACTIONAL PORTION OF THE SEAT/OCCUPANT C Z - Z POSITION OF THE AIRSTREAM C Z - Z POSITION OF THE SEAT/OCCUPANT C.G. ADUC C REFIECT PARTIAL EXPOSURE OF THE SEAT/OCC C CXSO - COMBINATION WHEN FULLY EXPOSED TO THE AI C CXSO - C CXSO - C CXSO - C C CXSO - C CXS
C Z - Z POSITION OF THE SEAT/OCCUPANT C.G. ADUCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
C AERFORC - TOTAL AERODYNAMIC COUNTY IN SEAT/OCUPANIAL CASA DATA CONBINATION WHEN FULLY EXPOSED TO THE SEAT/OCC COMBINATION WHEN FULLY EXPOSED TO THE AIR SECONSO - CC SO - CL SO - AERODYNAMIC COEFFICIENTS CC SO - CL SO - AERODYNAMIC COEFFICIENTS CC SO -
C AERFORC - TOTAL AERODYNAMIC FORCE ACTING STATUS C CXSD - CCXSO - CCX
C CASO - COMBINATION WHEN FULLY EXPOSED TO THE AIR C CXSO - C CXSO
C CXSO - CYSO - C CYSO - C CXSO - C CLSO - AERODYNAMIC COEFFICIENTS C CMSO - C CNSO - C CNSO - C CRSO
C CYSO - C CZSO - C CZSO - C CZSO - C CASO - C CMSO - C CMSO - C CNSO - C C
C CZSO - CLSO - AERODYNAMIC COEFFICIENIS C CMSO - C GNSO - C GNSO - C CNSO - C CNSO - C CNSO - C TF SOALPH, SOBETA, OR SOMACH IS OUTSIDE C COEFFICIENTS TABLE LIMITS, A MESSAGE IS C THE RUN IS TERMINATED C COEFFICIENTS TABLE LIMITS.
C CLSO - AERODYNAMIC COEFFICIENTS C CMSO - C CNSO - C CNS
C CNSO - C COEFFICIENTS TABLE LIMITS, A MESSAGE IS THE RUN IS TERMINATED C COEFFICIENTS TABLE LIMITS, A MESSAGE IS C COEFFICIENTS TABLE LIMITS, A MESSAGE IS C COEFFICIENTS TERMINATED C CONTRACTOR - CONT
C CNSO - C POTENTIAL ERROR CONDITIONS: C POTENTIAL ERROR CONDITIONS: C C COEFFICIENTS TABLE LIMITS, A MESSAGE IS C THE RUN IS TERMINATED C.
C POTENTIAL ERROR CONDITIONS: C TE SOALPH, SOBETA, OR SOMACH IS GUISIDE C C COEFFICIENTS, A MESSAGE IS C THE RUN IS TERMINATED C.
C POIENTIAL ERRUR CONDITIONS: C T SOALPH, SOBETA, OR SOMACH IS OUTSIDE C C COFFICIENTS TABLE LIMITS, A MESSAGE IS C THE RUN IS TERMINATED C
C COEFFICIENTS TABLE LIMITS, A MESSAGE IS C THE RUN IS TERMINATED C. THE RUN IS THE
C THE RUN IS TERMINATED  C THE RUN IS TERMINATED  C C THE CONTRACTOR TO THE CONTRACT
C COEFFICIENTS (USED IN SUBROUTINE AFROIN) COMMON BLOCK

1Y RADDEG DEGRAD	C CONSTA	C CONSTANTS COMMON BLOCK		•			BLOCK
COMMON DENSITY / 141MOS  + FRESALT(3) DIEMP - VAWIND - VAWIND - COMMON FORCES COMMON BLOCK - FXLSO(6) F72LSO(6) F72LSO(6) - FXLSO(6) F72LSO(6) F72LSO(6) - FXRSO(6) F72LSO(6)	C DENSIT	DAMON /CONSTNI /	GRAVITY	RADDE	0	GRAD	. P1
C SECTION / FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C SECTION / FORMON	D + + +	MMON /DENSITY /	IATMOS PRESALT(3 TEMPS VXWIND	OLDA OLDA 3) DIEM	L1(3) .	RHOS	* * * * * * * * * * * * * * * * * * *
COMMON / FORCESO / FXCASO(2)   FYCASO(2)   FXTUBSO   FYTUBSO   FYTUBSO   FXTUBSO   FYTUBSO   FYTUBSO   FXTUBSO   FYELSO(6)   FXELSO(6)   FXCHSO(6)   FYELSO(6)   FYELSO(6)   FXCHSO(6)   FYELSO(6)   FYELSO(6)   FXCHSO(7)   FYCHSO(7)   FXCHSO(7)   F	C SEAT/D	CCUPANT FORCES	COMMON BLC	ick	•	• • • • • • • • • • • • • • • • • • • •	•
FXRK50(6) FYRK50(6) FYRK50(6) FZRK50(6)  FXCHSO(3) FYCHSO(3) FZCHSO(3)  FXCHSO(3) FYCHSO(3) FZCHSO(3)  FXCHSO(3) FYCHSO(3) FZCHSO(3)  FXCHSO(3) FYCHSO(3) FZCHSO(3)  C SECTION 4 COMMON BLOCK  C SCTION 1 COMMON NINDX WINDX WINDX XCVEL CKPITHT.  OF STATE WINDX WINDX WINDX XCVEL CKPITHT.  OF STATE WINDX WINDX WINDX XCVEL CKPITHT.  OF STATE WINDX WINDX XCVEL CKPITHT.  OF STATE WINDX WINDX XCVEL CKPITHT.  OF SECTION 1 COMMON BLOCK  C SCTION 1 COMMON VICONTRL / TSTATE 1 SDSFP IPLOT 1 IDRIFLG.  INTEGER FSTATE 1 SDSFP IPLOT 1 IDRIFLG.  C INFOOA DATA (USED IN SUBROUTINE AERDIN) COMMON BLOCK  C SECTION 6 COMMON VINEOA / NCXS(12) CCGSO 17XSO 1 TXSO 1	80 • • •	MMON /FORCESD /	FXCASO(2) FXTUBSO FXSLSD(6)	FYCAS	0(2) , F7 S0 , F7 0(6) , F7	2CASO(2) 2TUBSO 2SLSO(6)	•
COMMON /IAIRCRT / TEMP , PRESSUR, ZACVEL , XPOS , YPOS , Y	++++		FXRKSO(6) FXCHSO(3) FXAESO FXDRTSO	· · · · ·		ZRKSD(6) ZCHSD(3) ZAESO ZDRTSO	
COMMON /IAIRCRT / TEMP	C SECTIO	IN 4 COMMON BLOC	CK CK	•	•	•	•
C SECTION I COMMON BLOCK C COMMON / ICONTRL / ISTART   ISTOP   ESTOP   IRESTRT   IUNITS   ISTART   IPHASE2   IPHASE3   INFECTOR   IN	* 5 * * *	MMON /IAIRCRT /	TEMP . ZPUS	PRESSUR, XTAIL	ZACVEL	XPOS ZTAIL	YPOS
C SECTION I COMMON BLOCK  C COMMON /ICONTRL / TSTART   TSIOP   ESTOP   IRESTRT   IUNITS    1	· + + + ·		WINDX DENSITY IACSFLG	WINDY	WIND2 AAT (4, 50	XACVEL	CKPITHT.
COMMON / ICONTRL / ISTART TS10P ESTOP , IRESTRT, IUNITS , IPHASE2, IPHASE3  LINTGER ESTOP  C. INFOO4 DATA (USED IN SUBROUTINE AERDIN) COMMON BLOCK  C. COMMON / INFOO4 / NCXS(12)  C. SECTION 6 COMMON BLOCK  C. SECTION 6 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 6 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 8 COMMON BLOCK  C. SECTION 6 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 7 COMMON BLOCK  C. SECTION 8 COMMON BLOCK  C. S	c SECTIO	N I COMMON BLO	CK				
C INFOOA DATA (USED IN SUBROUTINE AERDIN) COMMON BLOCK C COMMON / INFOO4 / NCXS(12) , NCYS(12) , NCZS(12) C SECTION 6 COMMON BLOCK C COMMON / ISEATOC / IPCNTL	0 + ×	IMMON /ICONTRL /	ISTART , ISEATTR, IPHAGE 1.	1510P 1505EP 1PHASE2,	ESTOP IPLOT IPHASE3	IRESTRI IDRIFLG	. 1UNITS .
COMMON /INFGO4 / NCXS(12) , NCYS(12) , NCZS(12) , DLTC(3,12) , ENDPC(8,12) , IAERCSG(12) , CSECIION 6 COMMON BLOCK C. SECIION 6 COMMON BLOCK C. SECIION 6 COMMON SEATOC / IPCNIL , XCGSD , YCGSD , ZCGSD , IXXSD , HYYSO , IXXSD , IXXDA , IXXSD , IXX	C INF004 C	DATA (USED IN	SUBROUT INE	AEROIN)	COMMON	3L0CK	: :
C SECTION 6 COMMON BLOCK C	3.	IMMON / INFOO4 /	NCXS(12) DLTC(3, 12	Ž	CVS(12) NDPC(8.13	NC . IA	75(12) ERCSO(12)
ION / ISEATOC / IPCNIL , XCGSD , YCGSD , ZCGSD , IYSO , IYSO , IYSO , IYSO , IXSO , IX	C SECTIO	N 6 COMMON BLOC	X		• • • • • • • • • • • • • • • • • • •		
	5 + +	IMMUN / ISEATUC /	IXYSO .	XCGSD 1XZSD AREADA	TYYSO MGHTQAB	1YZSU WGHTOAA	. 12250 .
IXXSO . IXXSO . IXZSO . IYYSO .	+ +		IXX0A .	1xvoA xcgoA	1x20A ycg0A	1YYOA ZCGOA	. 1YZOA .
1770A . 1710A . 1720A .	A + +	Ĭ	17750 . 17250 .	1xys0 . 1xx0A .	1x2S0 1xY0A	1 Y Y S O	. 17250 . . 1770A .

+ + + REAL	•	IXYSA .	•	
+ + REAL		, PHI SA	•	
REAL		WGHTSA .	XPOSBOT, VPOSBOT.	
REAL		CS. YPUSSCS,	S	
	IXXSA , IXYSA	SA . IXESA . ITTSA	. IY25A .	
	WC771		***********	•
TRIX				•
PART NOMEON	: `	CONTRACTOR DUMPA(S S) DUMCA(S S)	(3 3)	
THE PROPERTY OF	-	•	. (2, 2)	
• •	DCMSAF(3, 3)	DCMOAF (3 3).	DCMSR(3,3)	
• •	DCMDUM(3,3)			
C MISCELLANEOUS	C. MISCELL ANEDLIS DATA COMMON REDCK	*********	**********	• •
*****	*************	*************	***********	•
8	SC / IPAGECT(31)	, LINECT(31)	IPRTCNT(31)	•
+	MAXLINE	. MAXREPT	MAXEVNT	
•	I EVLINE	IERRFLG	77	•
+	IDATE	HE ADAL T	HEADVEL	
•	d S U S H	HFANYAW	HEADPIT	•
- 4	NO CONTRACTOR	TORON I	BIAC	•
•	9/	-	SOLES CONTROL	•
•	KEPI VPE (D. 31)	•		•
•	IHEADER(24)	. IEVENIS(38)	•	•
+	٠	IMADC	, PRTEMP( 2)	•
•	PRIMASS(2)	. PRTINDX	, PKZVEL	
+	ZVECT(3)	. XYZ(3)	. SAVTIME	•
•	XACCEL(3)	. YACCEL(3)	. ZACCEL(3)	
INTEGER	REPTVPE	, BIAS	. PRTLNGT	
*	PRTWGIT		1	
	PRIEMP	PKIMASS		
	:	* * * * * * * * * * * * * * * * * * *	•	•
C	***************	*****************************	:	• • • • •
COMMON /MD	COMMON /MOMARMS /	,		
+REFLNSO ,	REFLNDA , REFLNSA .	URX(6) , URY(8)	.URZ(6) .	
+XSSOCA(2),	YSSOCA(2).ZSSOCA(2).	XSSORK(6),YSSORK(6	),ZSSORK(6),	
+XSSORRE .	YSSORRE ZSSORRE .	XSSOLRE , YSSOLRE	, ZSSOLRE	
+XSSOMRE	YSSOMRE ZSSOMRE	XSS0807 YSS0807	. 2550801	
+x5505R(6)	VSSOSB(6) ZSSOSB(6)	XBBCSAC YBRCSAC	ZRRCSAC	
	C400000 C400000	0030337	700000	
	7457554		ZAGMPF	
das Assit	ASSASSD 755ASDP	XABDAP(3) YBBDAP(3	7RRNAP(2)	
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		**************************************	75500000	
TARRODO(0).	TARREDUCED, TRREDUCED, ERREDUCED, ASSOCIAT, TOSOCIAT, ESCUENCE, ESCUENCE, ESCUENCE, ESCUENCE, ASSOCIATION ASSOCIAT	ASSOCIATION VECTOR	7650AC	
YASSUAL (2).	TOSOME (47, 4330AF (47, 17, 17, 17, 17, 17, 17, 17, 17, 17, 1	DEDCAR DEDCAR	. 240532.	
+ ASKLSAL	TSKLSAL , ZSKLSAL ,	ASSUAC , TSSUAC	. Sound	
+XKSUSB	YKSUSB , ZKSUSB .	AKKSBUI , TRKSBUI	, ZKKSBUI	
	, ZRRSB	9	۲.	
	. YAACSO . ZAACSO .	.XASDAC ,YASDAC	. ZASDAC .	
+XRSOAC .	YRSDAC ZRSDAC .	XSCPAP(2), YSCPAP(2	.YSCPAP(2), ZSCPAP(2)	
		*********************	••••••	•
	INTEGRATION ROUTINE COMMON BLOCK			•
		************	****	•
COMMON /RKUTTA	_	DELTAT	TRAJSO( 193)	
+	TRAUSA( 193)	•	TRAJCH(97,3)	
•	TRAJAC(193)	TVCF05(225)		

SUBKULI	SUBROUTINE AERFMSO 74/74	0PT ≠ 1		FTN 4.6+428	83/11/07. 09.41.53	9.41.53	PAGE
	4	OT OTHE	3340001	3340701			
	٠ ،	SINION	. IFCFR33	. X00×1	•		
	•	SINIONI	×11.	\X\-\.	•		
	•	IXX	INSUMA	, IRPASSA			
175	•	X I X	IVI1X	. IVI2X	•		
	+	XE I A I	. IYPRIX	. IVPRITX			
	+	IYPRI2X	XIV41	YI I MAI 1X	•		
	•	ICYIX	. ICYI 1X	. IREIN			
	C	**************	*************	**************			
180	C TORQUE SEAT/OCCUPANT COMMON BLOC	NT COMMON BL	DCK		•		
	··········	* * * * * * * * * * * * * * * * * * * *	************	***********	*******		
	COMMON /TDROSD	/ TLCASO(2)	) TMCASO(2)	INCASO(2),			
	*		•	TNTUBSO .			
	•	TLSLS0(6)	. ,	TNSLS0(6)			
40,	•	TI DVOOLE	-	TAIDKCO(A)			
0	•	T. O. 100 (O		. (0)00000			
	•	TLCHSO(3		INCHS0(3)			
	•	TLAESO	. TMAESO .	INAESO .			
	+	TLDRTSO	. TMDRTSD .	TNDRTSO			
	U						
96	C*************************************	***********	:	***********************	*******		
	C AERODYNAMICS INFORMATION COMMON BLOCK	MATION COMMO	₩ BLOCK		•		
		*********	**********	************	******		
	SOMMON ACOUNT	C / DAA! DL	DABETA				
	COMMON / MERCOLLS /		. UABETA	•			
	+	SAALPH	. SABETA .	•			
195	*	SOALPH	. SOBETA	SOVEL . SOMACH	·		
	+	CXDA	CYDA CZDA	CLOA CMOA C	CNOA		
	. 4	-	-	· VOID	. 4040		
	•	•	•	CMSA.	. VON		
	*	CXS0	CYSO , CZSO ,	CLSO , CMSO , CI	CNSO		
	• • • • • • • • • • • • • • • • • • •	*********	••••••	***********			
200	C DAMPING COEFFICIENT COMMON BLOCK	T COMMON BLO	¥	•			
3	CASE AND CALCULATION OF THE CASE AND CA	A S COMMON OF S					
		C / OWDOLD	Course Course				
	COMMON / DAMPING / DAMPING						
	ر	,					
	DIMENSION COF(6)	(9	1.				
205	REAL LACCEL		1:				
	C	**********	*****	· 19. 19. 19. 19. 19. 19. 19. 19. 19. 19.	*****		
	C COMPUTE WIND VELOCITY COMPONENTS IN SCS	ITY COMPONEN	. \$28 NI SI		•		
		********		*******	*****		
	TALATON LIAN	CIVIMAN ACIV	CALL DOTATE CHINAN VONTAL OF LACTOR				
210		7.00.00.00.00.00.00.00.00.00.00.00.00.00					
2					,		
	C CUMPUIE RESULIANI VELUCITY	VELUCITY			•		
		********	*****	· 医克里奇氏试验检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检	*****		
	XVEL = TRAJSO(5)	٠					
	YVEL " TRAJSO(6)	QNIMAA - (9					
215	ZVEL = 18AJSD(7)	•					
)							
	SOVE	ISAV + ISAX + ISAXITADS =	AVE - VVE + 7VE	( 1382 + 1382			
	•				4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
6	C CUMPULE ANGLE OF A	TIACK (SUALP	1), ANGLE UP SI	HOLE ANGLE OF ALTACK (SUALPH), ANGLE OF SIDESLIF (SUBLIA),	•		
770	C AND MACH NUMBER (MACHS)	ACHS)			•		
	C		*******************	**************	• • • • • •		
	SOALPH = -ZARCTAN(ZVEL, XVEL)	TAN( ZVEL , XVE	<b>-</b>				
	IF (SOALPH, LT.O	O SOALPH=SO	IF (SOALPH, LT. 0.0) SOALPH=SOALPH+ 2831852				
	SORFIA . O.O.						
376	C.C. MINES	413002 (0.0	VA21 12/12/14/24				
077	I' SUVEL . NE.	A 1 300C (O O	.NE. O.O. SUBEIA # ASIN(TVEL/SUVEL)	£1. J			
	SOALPH - SOALPI	SOALPH . RADDEG					
	SOBE TA = SOBE TA + RADDEG	RADDEG					
	,						

```
C COMPUTE FORCES AND MOMENTS FOR SEAT/OCCUPANT
C COMPUTE FORCES AND MOMENTS FOR SEAT/OCCUPANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRAUSO(13) * TRAUSO(13) + TRAUSO(17) + TRAUSO(18) + TRAUSO(18) + TRAUSO(17) + TRAUSO(18) * TRAUSO(18) + TRAUS
                                                                                                                                                                                                                                                                                                                                                                                     AACCEL = SQRT(TRAUSO(23) + TRAUSO(23) + TRAUSO(24) + TRAUSO(24)
                                    IF(IUNITS .EQ. 0) VSOUND = VSOUND/3.28
SOMACH = SOVEL / VSOUND
IF(SOMACH .LE. 1.2) GOTO 10
AVEL = SORT(TRAJSO(11) + TRAJSO(12) + TRAJSO(12) +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AERFORC = (.5 * RHOS * AREASO * SOVEL * SOVEL) * EXPOSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALL INTRECOEF(1,1),NCXS(1),NCYS(1),NCZS(1),DLTC(1,1),+ENDPC(1,1),2,SOALPH,ABS(SOBETA),SOMACH,COF(1),1FAIL)
1F(1FAIL .NE. O) GDTO SO
30 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DG 20 I=2,6,2
CALL INTRP(CGEF(1,1), NCXS(1), NCYS(1), NCZS(1), DLTC(1,1),
+ENDPC(1,1),2, SGALPH,4BS(SDBETA), SDMACH,CDF(1), IFAIL)
1F(1FAIL, NE, 0) GDTO 50
1F(SOBETA, LT, 0.0) CDF(1) = -CDF(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WRITE(5,40) TIME , SOMACH, SOVEL, AVEL, LACCEL, AACCEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INAESO - AERFORC + (XSSOSRP + CYSO - YSSOSRP + CXSO+REFINSO + CNSO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CKPITHT) EXPOSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TLAESO = AERFORC . (YSSOSRP . CZSO - Z . CYSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TMAESO = AERFORC + (2 + CXSO - XSSOSRP + CZSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IF((ABS(ZRRSBOT) + HGHTSA) .GT. CKPITHT) EXP
+(ABS(ZRRSBOT) + HGHTSA - CKPITHT) / HGHTSA
IF(ABS(ZRRSBOT) .GE. CKPITHT) EXPOSED = 1.0
IF(IEVENTS(5) .NE. O) EXPOSED = 1.0
Z = ZSSOSRP + (ZARMPE - (EXPOSED * ZARMPE))
                                                                                                                                                                                                                                                                                                                                            TRAJSO(19) + TRAJSO(19))
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRAJSO(25) + TRAJSO(25))
# 49.0212 + (TEMPS ++ 0.5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FXAESO = AERFORC + CXSO
FYAESO * AERFORC + CYSO
FZAESO * AERFORC + CZSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +REFLNSO + CLSO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +REFINSO + CMSO)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CXSO = COF(1)
CYSO =-COF(2)
CZSO =-COF(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXPOSED = 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CL SO * COF(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CNSD =-CDF(6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  =-C0F(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOMACH = 1.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CMSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                :
د د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ü
                                                      230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      270
                                                                                                                                                                                                                                                                                                   235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   275
```

-	
	•
មា	- NOT LONG
•	C SEAT/OCCUPANT BEFORE SEAT/OCCUPANT SEPARATION, AND ON.
	C METHAD - DEADY COCKETTINE FORM DANION ACCESS FILE AEDDIN .
10	COMMUNICATIONS
!	
	C CALLS:
	READMS
51	NON-COMMON VAR
	C ISEONO
20	POTE
	NONE
	C COEFFICIENTS (USED IN SUBROUTINE AERDIN) COMMON BLOCK
25	0.0000000000000000000000000000000000000
	COMMON /CDEF / CDEF(700,6)
	*
	C INFOOA DATA (11SFD IN SUBBOUTINE AFROIN) COMMON BLOCK
	Constitution of the state of th
90	
}	. ENDPC(6, 12)
	DIMENSION INFD2(30, 10), INFD3(20, 13)
	REAL INFO2, INFO3
35	
	IF (IAERCSQ(J) .GT. 20) GO TO 10
	NDLTC = 3
	NEMDPC = 6
	I SE Q2 = I A E R C SQ ( ∪ )
04	CALL READMS(2, INFO3, 260, 51)
	FIDENT = INFO3(15E02.1)
	NCX5(J)=INFO3(1SE02,2)+.5
	NCYS(J) = INFO3(1SEO2, 3) + .6
	NC2S(J)=INF03(ISE02.4)+.5
45	DLTC(1,J)=INF03(1SE02,5)
	DLTC(2,J)=INF03(ISE02,6)
	DLTC(3,J)*INFD3(1SEQ2,7)
	ENDPC(1,J)=INFO3(1SEQ2,8)
	ENDPC(2, J) = INFO3(1SEQ2, 11)
50	ENDPC(3, J) = INFO3(1SEQ2, 9)
	ENDPC(4, J) = INFO3(ISEQ2, 12)
	ENDPC(5, J) = INFO3(1SEQ2, 10)
	ENDPC(6, J) * INFQ3(156Q2, 13)
;	
r r	10 ISEQZIAERCSQLUJ-ZO
	NOTE - 2

	SUBROUTINE AEROIN	AEROIN	14/74	OPT=1	FTN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE	53
		CALL	READMS(2 T = INFO2	, INFD2, 300, 52)					
9		NCXS(	U) = INF02 U) = INF02	(ISE02,2)+.5 (ISE02,3)+.5					
		NC2S(	1, 0) = INF	02(15602,4)					
65		ENDPO	2, J)=INF (1, J)=IN (2, Z)=IN	02(1SEQ2,5) FO2(1SEQ2,6) EO2(1SEQ2,8)					
		ENDPC	(3, C) * IN	F02(1SEQ2.7) F02(1SEQ2.9)					
02		MPTS=6	NCXS(J)+( DEADMS(2)	IOS ICAS(J)*NCYS(J)*NCZS(J) FROMS(2 CREff.J) NDIS IAEDGGG(J)					
		100 CONT II	Z Z	100 CONTINUE RETURN END					

SUBROUTINE	2F T	•••••••	• • • • • • • • • • • • • • • • • • • •
C DESCRIPTION - LEVEL 2 C FUNCTION - COMPUTE C METHOD - COMPUTE C FROM A C FROM A	LEVEL 2 COMPUTES AIRCRAFT TRAJECTORY PARAMETERS COMPUTES AIRCRAFT ACCELERATIONS AND VELOCITIES, LINEAR AND ANGULAR ACCELERATIONS ARE INTERPOLATED FROM A TABLE OF INPUT VALUES, LINEAR AND ANGULAR VELOCITY DERIVATIVES ARE SET TO	ECTORY PARAMETER LERATIONS AND VE ELERATIONS ARE 1 VALUES.	SECUTIES. INTERPOLATED SEARE SET TO
COMMUNICATIONS CALLED BY	THOSE COMPUTED FROM THE PREVIOUS INTEGRATION STEP GESS	E PREVIOUS INTEC	SRATION STEP.
C CALLS: C CON-COMMON VARIABLES DEFINED: NONE C POTENTIAL ERROR CONDITIONS: NONE C POTENTIAL ERROR CONDITIONS: NONE CARACTORISTORISTORISTORISTORISTORISTORISTORIS	IT ROTATE S DEFINED: NONE STITONS: NONE	# 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
C SECTION 4 COMMON BLOCK C	.DCK / TEMP . PRESSUR, ZDDC XTATI	UR, ZACVEL . XF	XPOS YPOS
+ ZPOS XTAIL YTAIL ZTAIL YAW ; + PITCH ROLL ROLL QUEL PVEL PUTCH CRPITHT; + DENSITY, NPISAAT, AAT(4,50), NPISLAT,LAT(4,50), + IACSFLG C	ZPOS XTAIL , WINCH , WINDX , WINDY , DENSITY, NPTSAAT, IACSFLG	YTAIL . ZTAI , RVEL . QVEL , WINDZ , XACV AT, AAT(4,50), NP	YTAIL ZTAIL YAW RVEL OVEL PVEL WINDZ XACVEL CKPITHT AAT(4,50), NPTSLAT,LAT(4,50)
COMMON /ICONTRL / TSTART , TSTOP , ESTOP , IRESTRT. IUNITS + ISEATTR, ISOSEP , IPLOT , IORIFLG, IPHASE2, IPHASE3 INTEGER ESTOP C MATRIX COMMON BLOCK	/ TSTART , TSTOP , ISEATTR, ISOSEP , IPHASE1, IPHASE2, ESTOP	E2, IPHASE3	•
Common /Matrix / DCMAE(3.3) . DCMRA(3.3) . DCMSA(3.3) . DCMSA(3.3) . DCMSA(3.3) . DCMSA(3.3) . DCMSE(3.3) . DCMSE(3.3) . DCMSE(3.3) . DCMSE(3.3) . DCMSE(3.3) . DCMSA(3.3) . DCMSA(3.3) . DCMSA(3.3) . CMDAE(3.3) . DCMSA(3.3) . CMDAE(3.3) . DCMSA(3.3) . D	/ DCMAE(3,3) . D DCMSE(3,3) . D DCMSE(3,3) . D DCMSAE(3,3) . D DCMGM(3,3)	DCMRA(3,3) DCMSA(DCMTS(3,3), DCMSE(DCMTS(3,3), DCMSE(D	DCMSA(3.3) . DCMTE(3.3) . DCMSR(3.3) .
C MISCELLANEOUS DATA COMMON BLOCK	OMMON BLOCK		
COMMON /WISC + + + + + + + + + + + + + + + + + + +	/ IPAGECT(31) MAXLINE IEVLINE IDATE HEADSR HEADROL	LINECT(31) MAXREPT TERRELG HEADALT HEADYAW HEADWGT	. IPRICNI(31) . MAXEVNI . LU . HEADVEL . HEADPIT
+ + + + +	REPTYPE(5,31) IHEADER(24) PRIMASS(2) ZVECT(3) XACCEL(3)	PRTLNGT(2) . IEVENTS(38) IMVDC . PRTINDX . XYZ(3)	PRIMGHI(2) TIMES(38) TRES(38) PRIEMP(2) PRZVEL SAVIIME SAVIIME ZACCEL(3)
INTEGER	REPTYPE	. BIAS	PRTLNGT

```
PAGE
 83/11/07, 09,41,53
                                                             C INTEGRATION ROUTINE COMMON BLOCK
C COMMON /RKUTTA / TIME, TIMES, DELTAT , TRAJSO(193) , TRAJOA(193) , TRAJOA(193) , TRAJOA(193) , TRAJOA(193) , TRAJOA(193) , TVCEOS(225) , QUATSO(65) , QUATSO(65) , INTSTP , INTSTP , IPCPASS , IRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C IACSFLG: MEANING:
C O CONSTANT AIRCRAFT LINEAR ACCELERATION IN ACS;
C O CONSTANT AIRCRAFT LINEAR ACCELERATION IN ACS;
C I CONSTANT AIRCRAFT LINEAR ACCELERATION IN ACS;
C VARIABLE AIRCRAFT LINEAR ACCELERATION IN EFCS;
NO ANGULAR MOTION
C 3 VARIABLE AIRCRAFT LINEAR ACCELERATION IN EFCS;
                                                                                                                                                                                                                                                                                                                                                                                                  1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF(IACSFLG .GE. 2) CALL ROTATE(TRAJAC(17),TRAJAC(17),ZVECT(1),
                                                                                                                                                                                                                                                                                                                FTN 4.6+428
                                                                                                                                                                                                                  IKPASSX
IY12X
                                                                                                                                                                                                                                                  IYPRI 1X
                                                                                                                                                                                                                                                                   IPYI 1X
                                                                                                                                                                                                    IYPRX
                                                                                                                                                                                                                                                                                    IRE IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALL ZLININT(TIME ,LAT,NPTSLAT,50,TRAJAC(17),4)
                                                 PRTMASS
                                                                                                                                                                                                                                                  I Y PRIX
I PY I X
                                                                                                                                                                                                                   IKSUMX
                                                                                                                                                                                                                                   IYIIX
                                                                                                                                                                                                    ١×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF(ABS(TRAJAC(14)) .GE. 0.5) G010 5
IF(ABS(TRAJAC(15)) .GE. 0.5) G010 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(NPTSLAT .EQ. 0) G010 30
IF(NPTSLAT GT. 1) G010 10
IF(IACSFLG .LT. 3) G010 20
IRAJAC(17) = LAT(2,1)
IRAJAC(18) = LAT(4,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     IF (TRAJAC(4). GE.O.O)GDTO 5
                                                                                                                                                                                                    IPOINTS
                                                                                                                                                                                                                                                                   IYPR12X
                                                                                                                                                                                                                                                    IYI3X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C SET UP ACCELERATIONS IN ACS
 0PT=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TIMES(32)=TIME
TRAJAC(1) = 0.0
GDTG 500
CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1EVENTS(32)=1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  G010 20
 SUBROUTINE AIRCRFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                  9
                                                                                                                                                                    65
                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                    75
                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505
```

PAGE 83/11/07, 09.41.53 C COMPUTE VELOCITY COMPONENTS IN EFCS 30 CONTINUE IF(NPTSAAT .GT. 1) CALL ZLININT(TIME,AAT,NPTSAAT,50,TRAJAC(23),4) FIN 4 6+428 40 CONTINUE
CALL ROTATE(TRAJAC(5),TRAJAC(14),ZVECT(1),DCMAE,1)
TRAJAC(20) = TRAJAC(11)
TRAJAC(21) = TRAJAC(12)
TRAJAC(22) = TRAJAC(13)
500 CONTINUE
RETURN
EFURN 74/74 OPI=1 + DCMAE,O) SUBROUTINE AIRCRFT 200 115 120 130 125

	74/74 OPT=1 FIN 4.6+428 83/
-	SUBROUTI
ស	FUNCTION - UPDA METHOD - ATMO THE TO T
ō	C THE CURRENT PRESSURE ALTITUDE. STANDARD DAY C FERSEATURE, AMBIENT TEMPERATURE, AND STANDARD DAY C PRESSURE, WHICH ARE THEN USED TO CALCULATE THE C COMMUNICATIONS - C COMMUNICATIONS - C CALLED RY:
ស្	NON-C
20	ALONE, OR SEAT ALONE - CHANGE IN TRAJECTORY HEIGHT SINCE THE UTHE RELEVANT CALLING SUBROUTINE - LATEST PREVIOUS ALTITUDE OF THE SEAT/OR - CALPANT ALONE OR SEAT ALONE
25	PWR - VALUE OF A POWER TSTD - STANDARD DAY TEM CURRENT PRESSURE POTENTIAL ERROR CONDITIONS.
30	C (518.688/TEMPS) A MESSAGE IS PRINTED AND THE RUN IS C TERMINATED C C C C C C C C C C C C C C C C C C C
35	C. SECTION   COMMON / LONTRE / TSTART , TSTOP , ESTOP , IRESTRI, IUNITS ,   FERTER   TSTART   TSTOP , ESTOP , IRESTRI, IUNITS ,   FERTER   TSTART   TSTOP   TRESTRI   TONITS ,   FERTER   TSTART   TSTART
0	C DENSITY COMMON BLOCK C
45	ONIMAA
20	1) IPRICNI (31) MAXEVNI LU HEADVEL HEADPIT
52 2	+ HEADROL HEADWGT BIAS

```
34
    PAGE
83/11/07, 09 41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C CHANGE METRIC UNITS TO ENGLISH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 WRITE(5,20)
20 FORMAT(1X,//72(1H+)/.4X,"FATAL ERROR(SUBROUTINE ATMOS)... "./.
+"IEMPS CALCULATED TO BE EQUAL TO ZERO RESULTS IN DIVISION BY ZERO"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C CHANGE ENGLISH UNITS BACK TO METRIC, TF APPLICABLE

C CHANGE CONTROL OF THE CON
                                                                                                                        PRIEMP(2)
PKZVEL
SAVTIME
                                                                                                                                                                                                                                                         . ZACCEL(3)
. PRTLNGT
    FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                          PRIINDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 ISID = 390.0

TEMPS = TSID + DIEMP

PWR * (PRESAL - 36089.) / 20787.

PSID - (1013.25 - 0.2234) / (2.71828 ** PWR)

10 If (TEMPS .EQ. 0.) G010 15

RHOS = 0.0023769 * (PSID / 1013.25) * (518 688 / TEMPS)

If (1UNIIS .EQ. 1) G010 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF (PRESAL GT. 36089.) GD TO 5
1SID = 518.688 - (0.003586 * PRESAL)
1EMPS = 1SID + DIEMP
PSID = 1013.25 * ((1SID / 518.688) ** 5.256)
GD 10 10
                                                                                                                                                                                                                                                         YACCEL(3)
BIAS
                                                                                                                                                            PRTINOX
                                                                                                                                                                                                                                                                                                                                                                                  . PRTMASS
                                                                                                                                                                                                                 XY2(3)
                                                                                                                                                                        PRIMASS(2)
                                                                                                                                                                                                         ZVECT(3)
XACCEL(3)
REPTYPE
PRTWGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALTITUD = ALTITUD + 3.28
OLDALTT + OLDALTT + 3.28
PRESAL + PRESAL + 3.28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (IATMOS . EQ. O) RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1F(TUNITS . EQ. 1) GOTO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RHOS = RHOS + 521 21535
PRESAL = PRESAL/3.28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DHF = ALTITUD - OLDALIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRESAL # PRESAL + DHT
    0P1 = 1
    74/ 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    +./.72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G0 T0 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONTINUE
                                                                                                                                                                                                                                                                                                         INTEGER
    SUBROUTINE ATMOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U
                                                                                                                                                                                                                     ၀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

90

95

8

505

SUBROUTINE CATAFM			
DESCRIPTION - FUNCTION -	LEVEL 3 COMPUTES THE CATAPULT FORCES AND MOMENTS ACTING ON THE SEAT/OCCUPANT DURING THE CATAPULT STAGE OF THE	• • • •	
ME THOD -	EJECTION. THRUST FOR UP 10 1WO CATAPULTS IS CONSIDERED BETWEEN THE TIME OF CATAPULT IGNITION AND THE TIME WHEN THE SEAT ROLLOM OFFARS, THE FNO OF THE CATAPULT	••••	
COMMUNICATIONS	MINIOR THE STATE OF THE STATE O		
CALLED BY	: SEATOCC	•••	
C NON-COMMON VARIA C TSTAR(I) - TI	NON-COMMON VARIABLES DEFINED:  ISTAR(I) - TIME THAT HAS ELAPSED SINCE CATAPULT(I) IGNITION  CIC(I) - TRUST VALUES FROM THE CATAPULT(I) INPUT THRUST TABLE	· • • • • • • • • • • • • • • • • • • •	
C. SEAT/OCCUPANT FE	T/OCCUPANT FORCES COMMON BLOCK	• • • • • • •	
*************	*********	• • • • •	
COMMON /FORC	COMMON /FORCESO / FXCASO(2) . FYCASO(2) . FXTUBSO . FYTUBSO . FYTUBSO . FXTUBSO . FXSLSO(6) . FYSLSO(6) . FXRSO(6) . FYRLSO(6) .		
	FYCHSD(3) FZCHSD(3) . FYAESO . FZAESO . FZDRISO . FZDRISO		
C SECTION 9 COMMC	•	• • ·	
COMMON /ICATPLT / INCAT COMMON /ICATPLT / INCAT CATHR + CATHR PTURE	P(2) CATLNT(2), CATSIK(2), TCI P(2) YPOSAP(2), ZPOSAP(2), NPTSC ST(2,25,2), ITUBEND , KTUBE , CTUBE MITUBE EXTLNGT , ICAT	(2). 1(2). QUI	
	KEAL COMMON BLOCK	•••	
CCOMMON / ICON + INTEGER	COMMON /ICONIRI / ISTART , ISTOP , ESTOP , IRESTRI, IUNITS , ISOSEP , IPLOT , IDRI'LG, IPHASE3 , IPHASE3 ESTOP , ESTOP , IPHASE3	•	
٠ -	ION 3 COMMON BLDCK	• •	
COMMON / FDE	COMMON /1DELTAL / OIPHASI, OIFHAS2, DIPHAS3	• • • • • • • • • • • • • • • • • • •	
	ION 2 COMMON BLOCK	* * *	

MARREPT   MAKEVNI	MAXE   INE	• • • • • • • • • • • • • • • • • • •	MAXLINE IEVLINE IEVLINE IDATE HEADSR HEADSR HEADSR(24) REDIYPE(5.31 REDIYPE(5.31 REPTYPE(5.31 REPTYPE PRIMASS(2) REPTYPE PRIMASS(2) REPTYPE PRIMASS(2) REPTYPE	MAXREPI , IERREIG , HEADYAM , HEADWGT , PRTINGT(2) , EVENIS(3B) IMVDC , PRTINDX XYZ(3) , YACCEI(3) , BIAS , PRTINASS , YACCEI(3) , BIAS , PRTINASS , YACCEI(3) , RINASS , YACCEI(3) , RINASS , YASORRIE XSSORRIE , YSSORRIE XSSORRE , YSSOBBT XRCSAC , YRRCSAC XSSOSRP , YSSOSRP	MAKÉVNI  (U)  (HEADVEL  (HEADPIT  BIAS  PRIMO(H(2)  TIMES(38)  PRIFMP(2)  PRIFMP(2)  PRIFMP(3)  ZSSORK(6)  ZSSORK(6)  ZSSORR  ZSSORR  ZSSORR  ZSSORR  ZSSOSRP  ZSSOSRP  ZSSOSRP  ZSSOSRP  ZSSOSRP  ZARMPE  ZSSOSRP
IEVLINE	IEVLINE	• WOW • •	TEVLINE TDATE HDATE HDATE HEADSN HEAD	ifeRFIG ifeADALT ifeADAGT ifeA	HEADVEL HEADPIT HEADPI
IDATE	IDATE	• W •	IDATE HEADSR HEADSR HEADSR HEADSR HEADSR HEADSR HEADSR HEADSR HEADSR 14E DE TYPE REPTYPE REPTY	HEADALT HEADYAW HEADWAI HEADWAI LEVENIS(3B) HWDC PRINDX XYZ(3) YACCEL(3) HAS	HEADVEL HEADVIT HEADPIT HIABDIT HIABDIT HIABSISH PRIWGHT(2) TIMES(38) PRIFMP (2) PRIFMP (3) PRIFMP (6) ZASOBRT
HEADSR HEADWAW HEADPHT HEADROL HEADWAW HEADPHT HEADROL HEADWAT REPTREE 5.31) PRINGT(2) PRINGH(2) HHEADER(24) LEVENIS(38) TIME 5(38) HHEADER(24) LEVENIS(38) TIME 5(38) HHEADER(24) LEVENIS(38) TIME 5(38) HANDE XACCEL (3) YACCEL (3) PRILNGT PRINGHT PRINGH PRILNGT PRINGH SSCORE (3) YACCEL (4) YACCEL (4) YACCEL (5) YACCEL (5) YACCEL (5) YACCEL (6) ZACCH (3) YACCEL (4) YACCEL (4) YACCEL (4) YACCEL (5) YACCEL (5) YACCEL (6) YACCEL (6) YACCEL (6) YACCEL (6) YACCEL (6) YACCEL (7) YACCEL (	HEADSR HEADWAW HEADPIT HEADROL HEADWAY HEADWAL BIAS REPTYPE (5.31) PRINGT(2) PRINGH(2) HHEADER(24)   IEVENIS(38)   TIMES(38) HHEADER(24)   IEVENIS(38)   TIMES(38) HHEADER(24)   IEVENIS(38)   TIMES(38)  REPTYPE   PRINGL PRINGL PRINGL PRINGT REPTYPE   BIAS   SAVIIME XACCEL (3)   YACCEL (3)   RAVIIME REPTYPE   RIAS   RAVINGT PRINGHT   PRINAS   PRILINGT PRINGHT   PRINAS   PRILINGT PRINGHT   PRINAS   PRILINGT PRICHE   XSSORE   XSSORE   ZSSORE   ZSSORE   XSSORE   XSSORE   XSSORE   ZSSORE	• W •	HEADSR HEADSR HEADBOLL REDDER(24) ZVECT(3) ZVECT(3) XACCEL(3) REPTYPE PRIMASS(2) REPTYPE PRIMASS(2) REPTYPE PRIMASS(2) XACCEL(3) REPTYPE PRIMASS(2) REPTYPE RE	HEADYAW HEADWGT HEADWGT PRINGT(2) IEVENIS(38) HWVDC PRINDX YYCCEL(3) HIAS PRIMASS PRIMASS YSCORIC YSCORIC XSSORK(6) XSSORK(6) XSSORK(6) XSSORC XSSORGT YSSORR XSSORR XSORR XSSORR XSORR XSSORR	HEADPIT BIAS PRIME(2) TIMES(38) PRIFMP(2) PRIFMP(2) PRIVEL SAVIIME ZACCEL(3) PRILNGI PRILNGI PRILNGI PRILNGI PRILNGI ZSSORK(6) ZSSORRE ZSSORRE ZSSOSRP ZARRPE ZSSOSRP ZARRPE ZSSOSRP
HEADROL	HEADROL	• • • • • • • • • • • • • • • • • • •	HEADROL  REPTYPE (5.31  IHEADER(24)  PRIMASS(2)  ZVECT(3)  XACCEL(3)  REPTYPE  PRIMGHT  PRIEMP  NON BLOCK  MOMARMS / REFLNSA  REFLNOA  YSSOGA(2).ZSSOGRE  YSSOGRE  YSTOGRE  YSSOGRE  YSSOGRE  YSSOGRE  YSSOGRE  YSTOGRE	, HEADWGT ), PRTLNGT(2) , IEVENTS(3B) , IMVDC , PRT INDX , XYZ(3) , YACCEL(3) , B1AS , PRTMASS , YSSORK(6 XSSORK(6) XSSORK(6) XSSORR(7) XRRCSAC XSSORR (7) XRRCSAC	BIAS PRIWGHT(2) TIMES(3B) PRIFMP(2) PRYVEL SAVIIME ZACCEL(3) PRILNGI PRILNGI PRILNGI PRILNGI PRILNGI CASSORE ZSSORRE Z
HEADER (24)   TEVINGT(2)   PRTWGHT(2)   THE SIGE     HEADER (24)   TEVINDS   TIME SIGE     LANDER (24)   TEVINDS   TIME SIGE     ZVECT(3)   XYZ(3)   SAVIME     XYZ(3)   YACCEL (3)   PRTLNGT     PRTWGHT   PRTWASS   PRTLNGT     PRTWGHT   PRTWASS   PRTLNDX     REFLNSA   URX(6)   URX(6)   URX(6)     ZSSOGRE   XSSOGRE   XSSOGRE   ZSSOGRE     ZSSOGRE   XSSOGRE   XSSOGRE   ZSSOGRE     ZSSOGRE   XSSOGRE   XSSOGRE   ZSSOGRE     ZSSOGRE   XSSOGRE   XSSOGRE   ZSSOGRE     ZSSOSRE   XSSOGRE   XSSOGRE   XSSOGRE     ZSSOSRE   XSSOGRE   XSSOGRE   XSSOG	HEADER (24)   TEVINGT(2)   PRTWGHT(2)   HEADER (24)   TIME S(38)   T	• WOW •	REPTYPE (5.31 IHEADER(24) PRIMASS(2) ZVECT(3) XACCEL(3) REPTYPE PRIMGHT PRIMGH	), PRTUNGT(2) , IEVEN15(3B) , IMVDC , PRTUNDX , XYZ(3) , YACCEL(3) , BIAS , PRTWASS ,	PRIWGHT(2) TIMES(38) PRIFEMP (2) PRZVEL SAVTIME ZACCEL(3) PRILNGI PRILNGI PRILNGI PRILNGI PRILNGI ZASORRE ZARRE ZASORRE ZARRE ZASORRE ZARRE ZASORRE ZARRE
	HEADER(24)   IEVENIS(3B)   TIMES(3B)     PRIMASS(2)   XYZ(3)   PRITEMP(2)     XYZ(3)   XYZ(3)   SAVINE     XYZ(3)   XYZ(3)   SAVINE     XYZ(3)   XYZ(3)   ZACCEL(3)     REPLYPE   RIAS   RIAS     PRIMASS   RIAS   RIANGI     PRIMGIT   PRIMASS   PRILNGI     PRIMGIT   PRIMASS   PRILNGI     REFLNSA   URX(6)   URY(6)   URZ(6)     ZSSORRE   XSSORRE   XSSORRE   ZSSORRE     ZSSORRE   XSSORPE   XSSORRE   ZSSORRE     ZSSORRE   XSSORPE   XSSORPE   ZSSORPE     ZSSORRE   XSSORPE   XSSORPE   XSSORPE     ZSSORRE   XSSORPE   XSSORPE   XSSORPE     ZSSORRE   XSSORPE   XSSORPE   XSSORPE     ZSSORRE   XSSORPE   XSSORPE   XSSORPE	• WOW •	PRIMASS(2) ZVECT(3) XACCEL (3) XACCEL (3) REPTYPE PRIMGHT PRIM	TEVENTS(3B)	TIMES(38) PRIFMP(2) PRZVEL SAVINE ZACCEL(3) PRILNGI PR
PRIEMOS   PRIE	PRIEMS   P	• M •	PRIMASS(2) ZVECT(3) XVECT(3) XVECT(3) XVECT(3) REPTYPE PRIMGHT PRIEMP NON BLOCK NOMARMS / REFLNSA XSSGA(2), ZSSGRE YSSGA(2), ZSSGRE YSSGA(2), ZSSGRE YSSGME	MYDC   MYDC   MYDC   MYZ(3)   MYCCEL(3)   MIAS	PRIFMP(2) PRIFMP(2) PRIFMP(2) PRIVEL SAVIIME ZACCEL(3) PRILINGI PR
PRIMASS(2)   PRIMODC   PRITHER   PRIMASS(2)   YACCEL(3)   YACCEL(3)   SAVTIME   SAVTIME   YACCEL(3)	PRIMASS(2)   PRIMOC   PRITMB(2)	• O • • • • • • • • • • • • • • • • • •	PRIMASS(2) ZVECT(3) XACCEL(3) REPTYPE PRIMGHT PRIMGHT PRIEMP NON BLOCK NUMBARMS / NUMBAR	IMUDC , PRIINDX , XYZ(3) , YACCEL(3) , BIAS , BIAS , PRIMASS	PRIVEL PRZVEL SAVINE ZACCEL(3) PRILNGI PRILNGI PRILNDX PRILNDX PRILNDX SSOURE ZSSOURE ZSSOURE ZSSOURE ZSSOURE ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP ZSSOSRP
PRIMASS(2)	PRIMASS(2)	• MO •	PRIMASS(2) ZVECT(3) XVECT(3) XVECT(3) XREDITYPE PRIMENT PRIEMP WOUNDERNS WOMMARMS / RELING RELINGA (2) YSSOGA(2), ZSSOGRE YSSOGRE ZSSOGRE YSSOGRE ZSSOGRE YSSOGRE ZSSOGRE YSSOGRE ZSSOGRE YSSOGRE ZSSOGRE YSSOGRE ZSSOGRE	, XYZ(3) , YAZ(2) , YAZCEL(3) , BIAS , PRIMASS , PRIMASS , SSDRK(6) , YSSDRK(6) XSSDR(6), YSSORR(6 XSSOROI , YSSORR(6 XSSOROI , YSSOROI XRRCSAC , YRRCSAC XSSOSRP , YSSORP	PRZVEL SAVTIME SAVTIME PRILNG! PRILNGS PRILNDX URZ(6) ZSSORK(6) ZSSORK(6) ZSSORR ZSSORR ZSSORR ZSSORR ZSSOSRP ZSSOSRP ZSSOSRP ZSRRP ZSSOSRP ZSSOSRP ZSSOSRP
ZACEL(3)	XYECT(3)	• MO• • • • • • • • • • • • • • • • • •	ZVECT(3) XACCEL (3) REPTYPE PRIMGHT PRIMGHT PRIEMP NON BLOCK MOMARMS / MOMARMS / NEFLNSA YSSOCA(2), ZSSOCA(2), YSSOCA(2), ZSSOCA(2), YSSOSME , ZSSOSME , ZSSOSME , YSSOSME , ZSSOSME , ZSSOSME , YSSOSME , ZSSOSME ,	. XYZ(3) . YACCEL(3) . B1AS . B1AS . PRIMASS	. SAVIIME . ZACCEL(3) . PRILNGI . PRILNDX 
REPLYPE	REPTYPE	• MO•	XACCEL(3) REPTYPE PRIMGHT PRIMGHT PRIMGHT PRIMGHT PRIMGHT NON BLOCK MOMARMS / REFLNSA REFLNSA YSSOCA(2), ZSSOCRE YSSOCRE	. YACCEL(3) . B1AS . PRIMASS	. ZACCEL(3) PRILNGI PRILNGI . PRILNDX . URZ(6) . ZSSORK(6) . ZSSORR(6) . ZSSORR . ZSSORP . ZSSOSRP . ZSSOS
PRIMGHT PRIMGHT PRIMGHT PRIMGHT PRIMGHT PRIMGS PRILNGI PRIMGHT PRIMGS PRILNGI PRIMGHT	PRIMASS   PRILING	• MO •	REPTYPE PRIEMP PRIEMP PRIEMP NON BLOCK ROMMARMS / REFLNSA REFLNOA YSSOGA(2).ZSSOGRE YSSOGRE	# # # # # # # # # # # # # # # # # # #	. PRTLNGI . PRTLNGI . PRTINDX
REPLYPE	REPLYPE	• M •	PRIEMP PRIEMP ION BLOCK MOMARMS / MOMARMS / MO	, BIAS, , PRIMASS	. PRILNGI . PRTINDX
PRIWGHT  PRIWGHT  PRIWGHT  TELNSA URX(6) URY(6) URZ(6)  2. ZSSOCA(2), XSSORK(6), ZSSORK(6), ZSSORRE XSSORRE	PRIWGHT  PRIWGHT  PRIWGHT  (2) 250CA(2) X50CR(6) (URY(6) (URY(6) (25) Z50CR(6) Z55CR(6) Z	• M •	PRIMGHT PRIMGHT PRIEMP  ION BLOCK  MUMARMS / MUMARMS /  REFLNSA /  'YSSOCA(2), ZSSOCRE 'YSSOCRE , ZSSOCRE		. PRTINDX .URZ(6) .URZ(6) .ZSSORK(6) .ZSSORR(6) .ZSSORR(7) .ZSSORP .ZSSOSRP
PRTEMP , PRTMASS , PRTINDX  (2) (2) (2) (2) (100 (6) (100	RELINDX   RRIMASS   PRILINDX	• • •	ION BLOCK MOMARMS / REFLNSA REFLNOA .REFLNSA YSSGCA(2).ZSSGCRE YSSGNRE .ZSSGRE YSSGNRE .ZSSGRE YSSGNRE .ZSSGRE YSSGNRE .ZSSGRE YSSGNRE .ZSSGRE	, PRIMASS	URZ(6) URZ(6) 1), ZSSORK(6), ZSSORR(6), ZSSORR(7, ZSSORR) ZSSORP ZSSORP ZSSORP ZSRRPE ZRRPE
(a) "REFLNSA" (URX(6) "URY(6) "URZ(6) "Z\$SQCA(2) "X\$SQDRK (6) "Z\$SQDRK (6) "Z\$SQDR (7) "Z\$SQDR (	(a) REFLNSA (URX(6) (URY(6) (URZ(6) (2) (250CA(2) (250CRK 6) (250CR	• M •	100 BLOCK MOMARMS / REFLNSA (1), YSSOCA(2), YSSORE (2)SSOCRE (2)SSORE (3)SSOCA(3), YSSOMRE (2)SSOMRE (3)SSOCA(3), YSSOCA(3)SSOCA(4)	URX(6) , URY(6)  XSSORK(6), YSSORK(6  XSSOLRE , YSSOLRE  XSSOBOT , YSSOBOT  XRRCSAC , YRRCSAC  XSSOSRP , YSSOSRP	URZ(6) . ZSSORK(6) . ZSSORRE . ZSSOBOT . ZSSOBOT . ZSSOSRP . ZSSOSRP . ZSSOSRP . ZSRPE . ZSSOSRP . ZSRPE
REFLNSA   URX(6)   URY(6)   URZ(6)	(2), ZSSOCA(2), XSSORR(6), VSSORR(6), ZSSORR(6), ZSRORR(6), ZSSORR(6), ZSSORR(6), ZSRORR(6), ZSRORR	MOM •	ION BLOCK  MOMBRMS / MORFELNSA  REFLNSA  YSSOCA(2),ZSSOCA(2),  YSSORE .ZSSORE  YSSORE .ZSSORE  YSSORE .ZSSORE  YSSORE .ZSSORE  YSSORE .ZSSORE	URX(6) , URY(6) XSSORK(6), YSSORK(6 XSSOR E , YSSOR E XSSOROT , YSSOBOT XRRSAC , YRCSAC XSSOSRP , YSSOSRP XRDAP(2) YRRAP(2)	. URZ(6) . ZSSORK(6) . ZSSOLRE . ZSSOBOT . ZSSOBOT . ZSSOSRP . ZSSOSRP . ZSSOSRP . ZSSOSRP . ZSSOSRP . ZSSOSRP
REFLNSA   URX(6)   URY(6)   URZ(6)	(a) (EFLNSA (URX(6) (URY(6) (URZ(6) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	COMMON / + RE FLNSO / + XS SOCA (2 + XS SORE + XS SORRE + XS SORRE + XS SORRE + XS SOSR (6 + XS SOSR (6 + XS SOSR (6 + XS SOSR (7 + XS	MUMARMS / REFLNSA REFLNOA .REFLNSA ), YSSOCA(2), ZSSOCA(2), YSSOCA(2), YSSOCA(2), YSSOCA(2), YSSOCA(6), YSSOSA(6), YSSOSA(6), ZSSOSA(6), YSSOCA(6), YSSOCA(6)	URX(6) , URY(6) XSSORK(6), YSSORK(6 XSSOLRE , YSSOLRE XSSOBOT , YSSOBOT XRRCSAC , YRRCSAC XSSOSRP , YSSOSRP	. URZ(6) . ZSSORK(6) . ZSSOLRE . ZSSOBOT . ZSSOBOT . ZSSOSRP . ZSSOSRP . ZARMPE . J. ZRRMPE
REFLNSA   URX(6)   URY(6)   URZ(6)     2. 255GRRE   X55GRR(6)   X55GRR(6)   Z55GRR(6)     2. 255GRRE   X55GRRE   X55GLRE   Z55GRR(6)     2. 255GRRE   X55GRRI   X55GBGT   Z55GBGT     2. 255GRRE   X55GRRI   X55GBGT   Z55GBGT     2. 255GRRE   X55GRP   X55GSRP   Z55GSRP     2. 255GSRC   X55GSRP   X55GSRP   Z55GSRP     2. 255GSRC   X55GGRP   X55GGRP   Z55GGRP     2. 25GSRP   X55GGRP   X55GGR   Z55GGR     2. 25GSRP   X55GGR   X55GGR   Z55GGR     2. 25GGR   X75GGR   X75GGR   Z55GRP     2. 25GGR   X75GGR   X75GRP   Z55GRP     2. 25GGR   X75GGR   X75GRP   Z55GRP     2. 25GGR   X75GRP   Z55GRP     2. 25GGR   X75GRP   Z55GRP   Z55GRP     2. 25G	(6) ZSSORRE (7) ZSSORK(6) , URY(6) , URZ(6) (2) ZSSORRE (7) ZSSORR	COMMON / +REFLNSO +RSGCA(2 +XSGCA(2 +XSGORE +XSGORE +XSGORE +XSGORE +XSGORE +XSGORE +XSGORE	MDMARMS / REELNSA REFLNAA .REELNSA 1, YSSGCA(2).ZSSGCA(2).; YSSGRRE .ZSSGRRE YSSGMRE .ZSSGMRE 1, YSSGORG (6).ZSSGSGG(6).	VSSORK(6) , URY(6) XSSORK(6), YSSORK(6 XSSOBOT , YSSOBOT XRRCSAC , YRRCSAC XSSOSRP , YSSOSRP	URZ(6) , ZSSORK(6), ZSSORK(6), ZSSOBOT , ZRCSAC , ZSSOSRP , ZRRCSAC , ZSSOSRP , ZRRMPE , ZSSOSRP , ZRRMPE , ZSSOSRP , ZRRMPE , ZR
T. S.	(a) , REFLNSA , URX(6) , URY(6) , URZ(6) , LZSSOCA(2) , XSSORRE , YSSORRE , ZSSORRE , ZSSORRE , XSSORRE , ZSSORRE , XSSOSRP , YSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOCP(2) , ZRRBAP(2) , ZRSSORP , XSSOCP(2) , ZSSOCP(2) , ZSSORP(2) , ZSSORP(2) , ZSSORP(2) , XSSOCP(2) , ZSSORP(2) , ZSCORP(2) , ZSCO	+REFLNSO +XSSOCA(2 +XSSORRE +XSSORRE +XSSOSNRE +XSSOSNS(6 +XSSOSAC	REFLNOA REFLNSA (), VSSOCA(2), VSSOCA(2), VSSORRE , ZSSORRE , YSSORRE , YSSOSHRE , YSSOSHGE , YSSOSHGE , YSSOSHGE , YSSOSHGE , YSSOSHGE , ZSSOSHGE , YSSOSHGE , ZSSOSHGE , YSSOSHGE , ZSSOSHGE , ZSSOSHG , Z	URY(6) .URY(6) .VSSORK(6).VSSORK(6 XSSOLRE .YSSOLRE XSSOBOT .YSSOBOT XRRCSAC .YRRCSAC XSSOSRP .YSSOSRP	URZ(6) 2550RK(6) 2550RE 2550B0T 2550B0T 27550SRP ZSSSRP ZSRPE 2750SRP
(2) ZSSORRE XSSORRE YSSOLRE ZSSORRE ZSSORRE XSSORRE XSSORRE XSSORRE XSSORRE ZSSORRE ZS	(2) ZSSORRE XSSORRE YSSORRE ZSSORRE ZSSORRE XSSORRE XSSORRE XSSORRE XSSORRE ZSSORRE ZS	+XSORRE +XSORRE +XSORRE +XSORRE +XSSOR(6 +XSSOSOR(6	. YSSOCA(2), ZSSOCA(2), YSSOCA(2), ZSSOCA(2), YSSOCA(2), ZSSOCA(2), ZSSOCA(3), YSSOSA(6), ZSSOCA(6), ZSSOCA(6)	XSSOR(6), YSSOR(6 XSSOR(6), YSSORRE XSSOROT , YSSOBOT XRRCSAC , YRRCSAC XSSOSRP , YSSOSRP	7.550RK(6) 7.550RK(6) 7.550B0T 7.550B0T 7.550SRP 7.550SRP
Common   C	Common   C	+ASSUCA(2 +ASSORRE +ASSORRE +ASSOSB(6 +ASSCSAC +	YSSUCA(Z), ZSSUCA(Z), YSSURE	XSSOLRE	7.555URK(6); 7.550URE; 7.550B0T; 7.750SRP; 7.750SRP; 7.750SRP; 7.750SRP; 7.750SRP; 7.750SRP;
ZSSORRE	ZSSORRE   XSSOLRE   YSSOLRE   ZSSOLRE	+X5SORRE +X5SOMRE +X5SO58(6 +X5SC5AC +	, YSSORRE , ZSSORRE , YSSOMRE , ZSSOMRE , ZSSOMRE , ZSSOMRE , ZSSOSB(6), ZSSO	5	.2550LRE , .2550LRE , .2550B0T , .2RC5AC , .2S50SRP2ARMPE , .2ARMPE , .2550CRP , .25
G	(6) ZSSOSR(6) XRRCSAC YRRCSAC ZRRCSAC ZSSOSRP ZSSOCP(2) YSSOCP(2) ZRRBDA(2) ZRRBDA(2) ZRSSOCP(2) ZSSOCP(2) ZSSOCP(2) ZSSOCP(2) ZSSOAC ZSSOCH(3) ZSRCSAC ZSSOCH(3) ZSSOCH(3) ZSRCSAC ZSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOCH(3) ZSSOCH(3) ZSCPAP(2)	+XSSOMRE +XSSOSB(6 +XSSCSAC +	YSSOMRE , ZSSOMRE , 11. YSSOSB(6), ZSSOSB(6), SSSOSB(6), ZSSOSB(6), ZSSOSB(6)	5	ZSS0801 ZRRCSAC ZSSOSRP ZARMPE ZRRMPE ), ZRROPE(2),
Common Block   Comm	6   75500R6   75500R1   75500R1   75500R6	+ XSSCSAC + XSSCSAC + XSSCSAC + ASSCSAC	1) YSSOSB(6), ZSSOSB(6), VSSOSB(6), ZSSOSB(6), ZSSOSB(6	<u> </u>	ZRCSAC , ZRCSAC , ZRCSAC , ZRRMPE , ZRR
66), ZSSGSB(6), XRRCSAC	(6) ZSSOSB(6) XRRCSAC (ZRRCSAC (ZRRCSAC (ZSSOSBP (ZSSOSBSOSBP (ZSSOSBP (ZSS	+x55058(6 +x55c54c +	.).YSSOSB(6).ZSSOSB(6).	5	ZRCSAC ZSSOSRP ZARMPE
ZSSCSAC	ZSSCSAC	+XSSCSAC +	75555	XSSOSRP ,YSSOSRP XSSOSRP XSSOSRP	ZSSOSRP ZARMPE ZARMPE
ZARMPE	ZSSASRP   XRRDAP(2), YRRDAP(2), ZRRDAP(2), ZSSASRP   XSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOAC   ZSSOAC   ZSSOAC   ZSSOAC   ZSSOAC   ZSSOAC   ZSSOAC   ZSSOAC   ZRSOBB   XRSSOCH(3), ZSSOCH(3), ZRSOCH(3), YRSOCH(3), ZRSOCH(3), ZRSOCH	+	7	XRBUAP(2) YRRUAP(2	ZARMPE ), ZRRDAP(2),
(6), ZRSASRP , XRROAP(2), YRROAP(2), ZRROAP(2), ZRROAP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOAC , ZSSOAC , ZSSOAC , ZSSOAC , ZSSOCH 3), ZRRSB01 , ZRSOCH 3), ZSCOCH 3), ZRACSO , XASOAC , YASOAC , ZASOAC , ZASOAC , XSCOCH 3), ZSCPAP(2), ZSC	(6), ZRSASRP , XRROAP(2), YRROAP(2), ZRROAP(2), ZRROAP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOAC , ZSSOAC , ZSSOAC , ZSSOAC , ZSSOAC , ZSSOCH(3), ZRRSB01 , ZRSOCH(3), ZSCPAP(2), YSCPAP(2), ZSCPAP(2),	•	)	XRBDAP(2) YRRDAP(2	), ZRRDAP(2),
7. SSASRP , XRRDAP(2), YRRDAP(2), ZRRDAP(2), ZRSASRP , XRRDAP(2), YRRDAP(2), ZRSASRP , XRSOCP(2), YSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(3), ZRSDSB	7. SSASRP , XRRDAP(2), YRRDAP(2), ZRRDAP(2), ZRSDAP(2), ZRSDAP(2), ZRSDAP(2), ZRSDAP(2), ZRSDAP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZSSOCP(2), ZRSDAP(2),			X R R R R R R R R R R R R R R R R R R R	), ZRRDAP(2),
(6), ZRRSBO(6), XSSOCP(2), YSSOCP(2), ZSSOCP(2), ZSSOAP(2), XESOAC	(6), ZRRSBO(6), XSSOCP(2), YSSOCP(2), ZSSOCP(2), ZSSOAP(2), XESOAC	+XSSASEP	YSSASRP , ZSSASRP	A C. I. S. L.	(0)0000000
258C5AC	28CSAC   XESOAC   YESOAC   ZESOAC   ZEACSO   XASOAC   ZASOAC   ZASOAC   ZASOAC   ZASOAC   ZASOAC   ZASOAC   ZESOAC   Z	+ XRR58016	TARRESO(6) ZRRSBO(6)	XSSOCP(2) YSSDCP(2	1.4350001
ZRSOSAC   XRSSOAC   YSSOAC   ZRSOAC	ZRSOSAC XSSOAC YSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOAC ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZACSO XASOAC ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSCSOCH(2), ZSCSOCH(2), YSCOAC ZSCSOCH(2), YSCOAC ZSCSOCH(3), ZSCSOCH(3), ZSCSOCH(2), YSCOAC ZSCSOCH(3), ZSCOCH(3), ZSCOCH(3)	C/QVCSCA+	) VCCDAD(3) ZCCDAD(3)	A COAN CANADA	ZECHAC
. ZRSCBAL . ASSUAL . ASSUAL . ZRSCBOI . ZRRSBOI . ZRACSO . XASOAC . YASOAC . ZASOAC . YASOAC . ZASOAC . YSCPAP(2) . ZSCPAP(2) . ZSCP	ZRSGSB XRSSB01 XPSSB01 ZRRSB01 ZRSGSB01 ZRRSB01 ZRACG XASDAC YASOAC ZASDAC ZASDAC ZASDAC ZRSDAC	T LEGGGG.	14 14 14 14 14 14 14 14 14 14 14 14 14 1	•	
ZRSO58 XRSSBO1 YRRSBO1 ZRRSBO1 , ZRRSBO2 , ZRSOCH(3) , ZSGCCH(3) , ZSGCCH(3) , ZSGCCH(3) , ZSCCAC(3) , ZRSOAC , ZRAOAC , ZRSOAC , ZRAOAC ,	ZRSO58 XRSSB01 , YRRSB01 , ZRRSB01 , ZRRSB02 , ZARCSO , XASOAC , YASOAC , ZASOAC , ZASOAC , YASOAC , ZASOAC , ZRSOAC , ZRAOCH (97 ) , TRAOCH (97 ) , TRAOCH (97 ) , TRAOCH (97 ) , TRAOCH (93 ) , TRAOCH (97 ) , TROCH	ASKUSAC	. ZSRCSAL	•	. 2350AC
. ZRRSB . XSSOCH(3), YSSOCH(3), ZSSOCH(3), ZAACSO . XASOAC . YASOAC . ZASOAC . ZASOA	. ZRRSB . XSSOCH(3), YSSOCH(3), ZSSOCH(3), ZAACSO . XASOAC . YASOAC . ZASOAC . ZASOA	+ KR505B	ZRSDSB.	XRRSB01 YRRSB01	ZRRSBOI
ZASCAC   XASCAC   YASCAC   ZASCAC   Z	ZASCAC   XASCAC   YASCAC   ZASCAC   Z	+XRRSB	ZRRSB	x550CH(3), Y550CH(3	), ZSSOCH(3),
. ZSCPAP(2), YSCPAP(2), ZSCPAP(2), ZSCPAP(2)	. ZRSCRAC (25CPAP(2), YSCPAP(2), ZSCPAP(2),	CSCAAXA	744550	YACOAC VACOAC	285080
. ZRSGAC XSCPAP(2), YSCPAP(2). ZSCPAP(2).  COMMON BLOCK  TRAJSA (193) TRAJDA (193) TRAJSA (193)	ZRSGAC   XSCPAP(2)   YSCPAP(2)   ZSCPAP(2)	TAMAL SU	" TENMA"	CASCAL CASCAC	
TIME   TIMES   DELIAT   TRAJSO(193)   TRAJSA(193)   TRAJDA(193)   TRAJCH(97,3)   TRAJSA(193)   TRAJSA(19	OMMON BLOCK  TIME I IMES DELTAT TRAJOR(193) TRAJOR(193	+XRSDAC	, ZRSDAC .	xSCPAP(2), YSCPAP(2	
TAME   TRAUGH   GT   GT   GT   GT   GT   GT   GT	TIME   TRAUSOL 193   TRAUSOL 194   TAUSOL 194   TAUSO		٠	**************	***********
TIME   TIME   TRAUDA   193   TRAUSA   193   TRAUSA   193   TRAUDA   193   TRAUSA   194   19	TIME   TIME   TRAJON (193)   TYPR				
TIME	TIME		KUDITUE COMMON BLOCK		
TIME   LIME   DELTAT   TRAUSO(193)   TRAUSA(193)   TREPASS   T	TIME TIMES DELIAI TRAUSD(193) TRAUSA(193) TRAUDA(193) TRAUCH(97.3) TRAUSA(193) TVCEOS(225) QULATSO(65) QULATSA(65) QULATSO(65) TNTSTP TYX TYX TYX TYX TYPRX TYX TYTX TYPRX TYX TYPRX TYX TYPRX TYX TYPRX TYX TYPRX TYPR TYX TYPRX TYPR TYX TYPRX TYPR TYPR TYPR TYPR TYPR TYPR TYPR TYPR			**************	•••••••••
TRAUSA(193) TRAUDA(193) TRAUCH(97.3) TRAUAC(193) TVCEGS(225) QUATSG(65) QUATSA(65) QUATGG(65) QUATSG(65) TNTSTP TPOINTS TWENTY TWPRX TWX TWX TWY	TRAUSA(193) TRAUDA(193) TRAUCH(97.3) TRAUAC(193) TVCEGS(225) QUATSG(65) QUATSA(65) QUATGG(65) QUATSG(65) QUATSA(65) QUATGG(65) QUATGG(65) TNISTP TPCPASS TREPASS TOPER TO TAX	/ NOMMOS	/ 1 IMF	DEI TAT	104.150(193)
TRAJAC (193)   TVCE (05 (225)   QUATSO (65)     QUATSA (65)   QUATOC (65)   QUATSO (65)     QUATSA (65)   QUATOC (65)     THE	TRAJAC (193)   TVCE (05 (225)   QUIATSO (65)     QUIATSA (65)   QUATAC (65)     QUIATSA (65)   QUATAC (65)     QUIATSA   TYR   TYR     TYR   TYR   TYR     TYR   TYR   TYR     TYR   TYR   TYR     TYR   TYR     TYR   TYR   TYR     TYR     TYR   TYR     TYR	•	IKAUSAL 1931	•	IKAUCH(87,51
QUATSA(65) . QUATOA(65) , QUATAC(65) . INESTP INISTP	QUATSA(65) . QUATOA(65) , QUATAC(65) . INISTP	*	1RAJAC(193)		OUAT50(65)
INTSTEMENT   INCRESS   I	INTSTEP	•	MINISTER		OHATAC (65)
INTSTP	INTSTP			•	
IPOINTS	POINTS	•	AIS IN	. IPCPASS	KKPASS .
IKX	IKX	•	IPOINTS	×.	IVPRX
Y   Y   Y   Y   Y   Y   Y   Y   Y   Y	YIX	•	×××	1VC11MX	INDACCY
1712X	1712x	•	***		, COOK 141
YPR13X	IV13X	*	XI A I	. IVIIX	1712X
IPPR12X	IPPRI2X   IPPLIX   IPPLIX   IPPLIX   ICVIX   ICVIX   IREIN   ICVIX   IREIN   ICVIX   IREIN   ICVIX	•	XEIAI	IYPRIX	IYPRIIX
ICYTX COMMON BLOCK TICASO(2) TMCASO(2) TILUBSO TMSLSO(6) TNSLSO(6)	ICYTX ICYTY IREIN COMMON BLOCK TICASO(2) TMCASO(2) TNCASO(2) TLIUBSO TMIUBSO INCUBSO TISTSO(6) IMSISO(6) TNSLSO(6)	•	XCIDON1	XIAGE	1DV11X
COMMON BLOCK  COMMON BLOCK  TICASO(2) TMCASO(2) TNCBSO(2)  TITUBSO TNTUBSO TNTUBSO  TISTSO(6) TMSTSO(6) TNSTSO(6)	TUTIA COMMON BLOCK TLCASO(2) TMCASO(2) TNCASO(2) TITUBSO TMTUBSO TMTUBSO TMTUBSO TMTUBSO TMTUBSO TMTUBSO TMTUBSO TMTUBSO TMSISO(6) TMS	• •			
COMMON BLOCK ' TLCASO(2) , TMCASO(2) , TNCASO(2) , TLUBSO , TMLUBSO , TNUBSO , TNSLSO(6) ,	COMMON BLOCK TLCASO(2), TMCASO(2), TNCASO(2), TLTUBSO, FMTUBSO, TNTUBSO, TNSLSO(6),	•	Y L S I		IKEIN
COMMON BLOCK	COMMON BLOCK			******	• • • • • • • • • • • • • • • • • • • •
	/ ILCASO(2) TMCASO(2) TNCASO(2) . ILIUBSO TMTUBSO TNTUBSO . ILSESO(6) TMSESO(6) .	C TORIGITE SEAT	OCCUPANT COMMON BLOCK		
/ TLCASO(2) , TMCASO(2) , TLTUBSO , TMTUBSO , TMTUBSO , TMSLSO(6) , TMSLSO(6) ,	/ TLCASO(2) . TMCASO(2) . TLTUBSO . TMTUBSO . TMSISO(6) .	C		* * * *	•
11.10850 TMT0850	11.10850 FMT0850	/ COMMON	/ TLCASD(2)		(2)
1MSI 50(6)	1MS1 S0(6)		11 111050		
1MS1 SD(6)	1MSI S0(6)	•	-	•	
		•	11 51 50(6)		(9)

```
83/11/07 09.41 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTE CATAPULT THRUST ON SEAT/OCCUPANT COMBINATION •
                                                                                                                        FTN 4.6+428
                                    TLCHS0(3) , TMCHS0(3) , TNCHS0(3)
                                                            INDRISO
                                              . THAE SO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ICA10U1 = ICA10U1 + 1
FXCASO(1) * FYCASO(1) * FZCASO(1) * 0 0
TLCASO(1) * TMCASO(1) * TNCASO(1) * 0.0
                                             TMAESO TMORTSO
                                                                                                                                                                                                                                                                                                                                                                                                                                              L = IFIX(1.E6 + TIMES)
K = IFIX(1.E6 + (DTPHAS1+PI1+5.E-10))
                                                                                                                                                                                                                                                                                                                                                           L = IFIX(*).E6 * IIME5)

K = IF_* \times (1.E6 * (DIPHAS1*5.E 10))
                                                                                                                                                                                                                                 IF (IEVENTS(I) GE. 1) GOTO 100
IF (INTSTP . EQ. 0) GOTO 500
                                                                                                                                                                                                                                                           IF (TIMES .LT. TCI(I)) GOTO 500
                                                                                                                                                                                                                                                                                                                                                                                 IF (MOD(L,K) NE. 0) GOTO 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IF (MOD(L,K) .NE. 0) GOTO 150
                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (IPHASE2 GT 1) GOTO 150
                                                                                                                                                                                                                                                                                                                                               IF(IPHASS2 .GT. 0) G010 +10
                                                TLAESO
TLDRTSO
                                                                                                                                                                                               C CHECK FOR CATAPULT IGNITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPRICNI(J) = PRIFRO - 1
  0PT = 1
                                                                                                DIMENSION TSTAR(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIMES(1+2) = TIME
                                                                                                                                                                                                                                                                                                                                                                                                          DELTAT - DIPHASI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IEVENTS(1+2) = 1
                                                                                                                                                                                                                                                                                                          TIMES(I) # TIME
IEVENTS(I) # 1
                                                                                                                                                                                                                                                                                   C CATAPULT IGNITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRTFRQ . PI1
 74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPHASE2 = 2
                                                                                                                                                                                                                                                                                                                                                                                                IPHASE2 *
                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              150 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GD TO 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONTINUE
                                                                                                                                                                                                                                                                                                                                   CONTINUE
  SUBROUTINE CATAFM
                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      170
                                      15
                                                                                                 120
                                                                                                                                                              125
                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              160
                                                                                                                                                                                                                                                                                    135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165
```

SUBROUTINE CAT	E CATAFM	74/74	0PT=1	F1N 4.6+428	B3/11/07.	83/11/07. 09.41.53	PAGE
	• • • • • • • • • • • • • • • • • • • •	9 * * * * * * * * * * * * * * * * * * *	•••••••	**************************************	:		
175	200 200 200 200 200 200 200 200 200 200	NIINUE TAR(I) = TI LL ZLININT(	CUNITADE TSTAR(I) = TIME - TCI(I) CALL ZLININT(TSTAR(I),CATHRSI(1,1	CUNITIONS CALL ZLININT(TSTAR(I).CATHRST(1,1,1).NPTSCT(I).25.CTC.2)			
	C TRANSFI	DRM THRUST	C TRANSFORM THRUST VECTORS TO SCS	SECTION THRUST VECTORS TO SCS			
	FZ	F2CASO(1)= CTC	J1				
180	COMPUT	C COMPUTE CATAPULT MOMENTS	MOMENTS	IDUTE CATADULT MOMENTS	• • • • • • • • •		
185	7 T T T	TCASO(1) # ) IMCASD(1) # ) INCASO(1) # )	YSSBCA(1) + FZCASB(1) ZSSBCA(1) + FXCASB(1) XSSBCA(1) + FYCASB(1)	TLCASO(1) = YSSOCA(1) + FZCASO(1) - ZSSOCA(1) + FYCASO(1) TMCASO(1) = ZSSOCA(1) + FXCASO(1) - XSSOCA(1) + FZCASO(1) TNCASO(1) = XSSOCA(1) + FYCASO(1) - YSSOCA(1) + FXCASO(1)			
	5000 CD	CONTINUE CONTINUE RETURN					
190	GNE	۵					

. ē 0 ē 0	C DESCRIPTION - LEVEL 4 C FUNCTION - CALCULAT C METHOD - AT DROGUE C COMMUNICATIONS - C CALLED BY: C CALLED BY: C DROGUE2	4	SCRIPTION - LEVEL 4	• • • • • • • • • • • • • • • • • • • •	•••	
رة أو بة 20	SCRIPTION - FUNCTION - METHOD - AMUNICATIONS CALLED BY	7 -				
5 6 5 15	METHOD - METHOD - AMUNICATIONS CALLED BY				• •	
න ලී වී රෝ	METHOD -	ULATES THE INITI	CALCULATES THE INITIAL VELOCITY AND POSITION COMPONENTS.	ITION COMPONENTS	•	
o s o	METHOD -	OF THE DROGUE SLUG/CONTAINER	ONTAINER			
o 85 00	AMUNICATIONS CALLED BY	ROGUE PROJECTION	AT DROGUE PROJECTION, INITIAL VALUES FOR POSITION	R POSITION	• •	
o 85 00	AMUNICATIONS CALLED BY	CONTAINER ARE COMPUTED IN THE FECS	ED IN THE EFCS			
o <b>s</b> o	CALLED BY					
					•	
<b>5</b> 00		UE1			•	
is o		UE2			•	
S	CALLS				•	
. S	C ROTATE	TE				
02	C NON-COMMON VARIABLES DEFINED	ES DEFINED - NONE	<b>.</b>		•	
Q	C POTENTIAL ERROR CONDITIONS - NONE	NDITIONS - NONE			•	
Q	C			•		
Q	CHARLETY COMBON BLOCK		*******************	•		
2	C MAINEY COMMAND BELOCK					
	COMMON /MATRIX		DCMRA(3 3)		,	
	+	•	•	(3.3)		
	•	DCMSAE (3, 3),	DCMDAE(3,3), DCMSR(3,3)	(3.3)		
	•	DCMDUM(3,3)				
25	Characterates and control of the common of the	CELLANDON DATA COMMON BLOCK	*****	••••••		
	Contraction of the Common of Contraction of Contrac	COMMON SECON		***********		
	COMMON /MISC	/ IPAGECT(31)		1PR1CN1(31)		
	+	MAXL INE	MAXREPT	MAXEVNT		
30	•	1EVL INE	. IERRFLG	בה		
	+	IDATE	. HEADALT .	HEADVEL ,		
	+	HEADSR	. HEADYAW .	HE ADP I T		
	•	HEADROL	. HEADWGT	BIAS .		
	+	REPTYPE (5,31)	) . PRTLNGT(2)	PRIWGHT(2)		
35	+	IHEADER (24)		TIMES(38)		
	•		I MVDG	PRIEMP(2)		
	+	PRIMASS(2)	PRIINDX			
	+	2VECT(3)	XYZ(3)	SAVIIME		
	•	XACCEL(3)		ZACCEL(3)		
40	INTEGER	REPTYPE	BIAS	PRTLNGT		
	+	PRIWGHT	,			
	•	•	. PRIMASS	PRTINDX		
	C	*************	*************	************	•	
	C MOMARMS COMMON BLOCK	×			•	
45		************	*******************		•	
	COMMON /MOMARMS /	40W 1430	(a) (a) (b) (c)	1107(5)		
	ACCIONAL VACOU	A(2) ZCCDCA(2)	(6) 466004(6)	, UK (10)		
	TOURS ( TIME OF THE OFFICE OFFICE OF THE OFFICE OF THE OFFICE OFF	200 200 200 200 200 200 200 200 200 200	XSSORR(S), 13304A(S)	2550FK (57)		
50		ZSSOMDE	VSSOBOI	7550801		
2	SOCIAL STREET	1 7 C C O C D ( 5)	7437667	2000047		
		54C 755C54C	COSCORAL.	7550500		
			incore .	ZADMDE		
	+XSSASRP YSSASRP	ZSSASRP	XRRDAP(2) VRRDAP(2) ZRRDAP(2)	7880AP(2)		
55	+xRRSBO(6) YRRSB	31 288580(6)	XSSDCP(2) YSSDCP(2) ZSSDCP(2)	755006(2)		
	TRESCORDED SECTION OF STANDING SECTION OF STAN	10(2) 755040(3)	ì	755045		
	CATCATA CATCATA	47 (4.1), (3.30AF14.).	30000	. ZE SUAC .		

;	+XRSQSB +XRRSB	YRSOSB YRRSB	ZRSOSB ZRRSB	(3)	1(3)	
09	+XAACSO +XRSDAC	YAACSO YRSOAC	ZAACSO . ZRSOAC	.XASOAC .YASOAC .XSCPAP(2)	. ZASOAC (2), ZSCPAP(2)	
	SEC	COMMON BLOCK	******	****	•	
	C	*****	***************************************	*****	****	
65	COMMON	COMMON /PARCHUT /	IRECOV RECORAG	, TROPLOY	POROSR	
	•		XRECAP	YRECAP	ZRECAP	
	+		NPTSRLS	, RECOVLS(2,25)		
	•		NPTSRFT	S,	•	
70	+		IDROGUE	, DRDRAG2	, DROGPD2	
	•		POROSD2	, VELCON	-	
	•		NPTOFT2	, DROGFT2(2,25)	. IFTDR01	
	٠ +		NPTOFI	DRUGE 1 ( 2 , 25 )		
75	• •		DISPLOY	DROGLL	• -	
•	+		OROGPD 1	POROSD 1	DROVELX	
	+		DROVELY	, DROVELZ	. XDROGAP	
	+		YDROGAP	ZDROGAP	CHALT1	
9	+ +		CHAL 12	CCIMIL .	. IDELAY	
2	• •		TFP2	TFP3	TOROGES	
	•		CDDC	NPTSRDT	, RECOVDT(2,25)	
			* * * * * * * * * * * * * * * * * * * *	**************	************	
ŭ	C INTEGRATION ROUTINE	ROUTINE CO	COMMON BLOCK			
n 0			TIME , TIMES	, DELTAT	193)	,
	•		TRAJSA( 193)	, TRAJOA(193)	, TRAUCH(97.3) .	
	+		TRAJAC( 193)	TVCEQS(225)	, QUATSD(65)	
	•		QUATSA(65)	. QUATOA(65)	. QUATAC(65) .	
06	•		INTSTP	. IPCPASS	. IRKPASS .	
	+ -		SINIDAI	. IYX	. 177XX 170480	
	٠ •		× × × × × × × × × × × × × × × × × × ×	, INSUMA	, 1874555 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 , 187755 ,	
	• •		1713	X100/1	1 1 1 2 4 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
95	• •		IVPDIOX	X1741.	10/11/	
3	. *		ICYIX	. 1CY11X	IREIN	
	ပ					
	167 108061 \$		th Cotto to			
Ş	TRAJCH(1 4)	. E				
3	IREIN =	•				
		••••••	• • • • • • • • • • • • • • • • • • • •	:	*******************	
	U					
			***	法债务证据证据证据证据证据证据证据证据证据证据证据证据证据证据证据证据证据证据证证证证	*****	
105	C COMPUTE INITIAL	TIAL VELOCI	VELDCITY COMPONENTS IN	TS IN SCS		•
	TRAJCH(5,1)	11	5) +	TRAJS0(9) + 2550CH(1)	) - TRAJSO(10) +	
	*		- -			
110	TRAJCH(6,1)	10	+ (9	TRAUSO(10)+ XSSDCH(1)	) - TRAUSO(8) .	
	T8AJCH(7 1)		ZSSUCH(1) + DRU TRAUSO(1) + TRA	DROVELY TRAJSO(A) + VSSOCH(1)	• (6)05/481 - (	
	•		· •			
	٠					

SUBROUT	SUBROUTINE CHAINIT	14/74	0PT=1		FIN 4 6+428	83/11/07	09 41.53	PAG
5	C TRANSFORM C	INITIAL	VELOCITY	RANSFORM INITIAL VELOCITY COMPONENTS TO FFCS		: :		
120		OTATE(TR.	АЈСН(5,	CALL ROTATE(TRAUCH(S,1),TRAUCH(S,1),ZVECT(1),DCMSE,1) GOTO 20	).DCMSE,1)			
125	TRACH(6.1) TRACH(6.1) TRACH(6.1) TRACH(7.1) TVEL = SORT	TRAUCH(5.1) = TRAUSO(14) TRAUCH(6.1) = TRAUSO(15) TRAUCH(7.1) = TRAUSO(16) TVEL = SORT(TRAUSO(14) + TRAUSO(16) + TRAUSO(14)	= TRAJSO(14) = TRAJSO(15) = TRAJSO(16) (TRAJSO(14) *	TRAJCH(6.1) = TRAJSO(14)  TRAJCH(6.1) = TRAJSO(15)  TRAJCH(7.1) = TRAJSO(16)  TVEL = SORT(TRAJSO(14) + TRAJSO(14) + TRAJSO(15) + TRAJSO(15) + TRAJSO(16) + TRAJSO(16) + TRAJSO(16) + TRAJSO(16) + TRAJSO(16) + TRAJSO(16)	0(15) + TRAUSO(15) +			
130	C TRANSFORM VECTOR	VECTOR FI	ROM S/D	RANSFORM VECTOR FROM S/O CG TO DROGUE ATTACHMENT POINT, FROM SSCS TO EFCS	ZI POINT, FROM	: ::		
135	20	CONTINUE XYZ(1) = XSSOCH(1) XYZ(2) = YSSOCH(1) XYZ(3) = ZSSOCH(1) CALL ROTATE(XYZ(1)	H(C) H(C) Z(C),XYZ	CONTINUE XYZ(1) = XSSOCH(1) XYZ(2) = YSSOCH(1) XYZ(3) = ZSSOCH(1) CALL ROTATE(XYZ(1), XYZ(1), ZVECT(1), DCMSE, 1)				
140	C COMPUTE IN	ITIAL PO	SITION	COMPUTE INITIAL POSITION COORDINATES IN EFCS		:::		
2.	TRAJCH(2,1) TRAJCH(3,1) TRAJCH(4,1)	6 H H	TRAJSO() TRAJSO() TRAJSO(	TRAJSO(2) + XYZ(1) TRAJSO(3) + XYZ(2) TRAJSO(4) + XYZ(3)				
	RETURN END							

SUBROL	UT INE	SUBROUTINE CHUTES 74/74		0PT=1		FI	FIN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE
-		SUBROUTINE CHUTES	JE CHUTES					:		
	'	C FUNCTION - CONROL	CONROL	2 S THE	SEQUENCING	LEVEL 2 CONROLS THE SEQUENCING OF CALLS TO THE RECOVERY	;			
n		C COMMUNICATIONS -	. CHOIS 18 - 19		3000 3000	KOU LANES				
		C CALLS	OCCALC S:	OCCALON, SEATOCC	1000			• •		
ç	- •	Ų LI (	OROGUE 1	- 0				• • •		
		RECOV C NON-COMMON VARIABLES DEFINED C POTENTIAL ERROR CONDITIONS -	RIABLES	DEFIN	ED - NONE - NONE					
<b>5</b>						• • • • • • • • • • • • • • • • • • • •	•	:		
	- <b>-</b> '	Caretterateraterateraterateraterateratera	MMON BL	OCK	***	teresteraterateraterateraterateraterateratera	***	* * :		
20	-	COMMON /PARCHUT / IRECOV	ARCHUT	/ IREC	•	TROPLOY	RECOVEL			
)		*		RECORAG	RAG	RECOVPD	POROSR			
		•		XRECAP	AP	, YRECAP	, ZRECAP			
		+		NPTSRLS	RLS	, RECOVLS(2,25)	. IFTRECV	•		
٥,		• •		NPTSRFT	RFT	RECOVET(2,25)	, SEPFRCE Dengens	•		
?		•		POROS02	502	VELCON	1F10R02			
		•		NP1DF12	FT2	. DROGFT2(2,25)	IFTDRO1			
		+ -		NPTDFT1	111	DROGFT1(2,25)	. IDROGLS			
30		+ +		DISPLOY	LOY	DROGLE 2, 25)	DRORAGI			
}		•		DROGPD1	PD1	POROSD 1	DROVELX			
		•		DROVELY	ברץ היים	DROVEL Z	. XDROGAP			
		• •		CHAL T2	12	GIMIT	TOFLAY	• .		
35		+		AREADC	DC	WGHTDC	TFP1		٠	
		•		TFP2	•	1FP3	TOROGLS	•		
	,	+		2002	-	NPTSRDI	, RECOVOT(2,25)			
40	-	IF (IRECOV IF(IDROGUE IF(IDROGUE	E 0 E	0) CALL 1) CALL 2) CALL	L RECOV L DROGUE 1 L DROGUE2					
	-	C RETURN END								
		1								

COMMUNICATIONS CALLE BY CALLS NON-COMMON VAR DIAFRAC - AREACHU - CONSTANTS COMM COMMON /CO COMMON /CO COMMON /DE COMMON /FO		LEVEL 4 CALCULATES PARACHUTE FORCES AND MOMENTS
THADIT AND CALCULATED ANGLES FOR AND VELOCITY  CCOCELERATIONS AND CALCULATED ANGLES FOR TOTAL VECUCITY  AND CHUITE PROJECTED AREA THE CHUITE IS THEN ALIGNED  ALITH THE WIND TO COMPUTE COMPONENT ORGES AND MONHINS.  CALLED TOTAL WINDS EDT THE SEAT ALONE  COMMUNICATIONS  COCCUPANT FORCE COMMUNICATIONS  COCCUPANT FORCES  COMMUNICATIONS  COCCU	METHOD -	S ROUTINE COMPUTES TOTAL PARACHUTE FORCE USING
COMMUNICATION AND CALCULATE VALUES FOR TOTAL VELOCITY  AND CHUITE FIRE WIND TO COMPUTE COMPONENT FORCES AND MONENTS  ACCELERATIONS AND VELOCITIES OF THE CHUITE ARE SET FELOUAL TO THOSE OF THE CHUITE ARE SET ALONE  COMMUNICATIONS  CALLED BY:  CALLED BY:  CALLES BY:  CALLS:  CALLS:  CALLS:  CALLS:  CALLS:  CALLS:  CALLS:  CALLS:  COMMON VARBABLES OFF THE CHUITE DIAMETER THAT IS EXTENDED OF THE CHUITE MET AT IS EXTENDED OF THE CHUITE WELL WITH THE WIND OF THE CHUITE WELL WELL WITH THE WIND OF THE CHUITE WELL WELL WITH THE WIND OF THE CHUITE WELL WELL WELL WELL WELL WELL WELL WE		UT VALUES FOR PARACHUTE DIAMETER AND DRAG
MAD CAULE PROJECTION AREA  CCELERATIONS AND VELOCITES OF THE CHUTE ARE SET EQUAL TO THOSE DE THE CRATTON.  CALLE BY  CALLED BY:  CALLES  CALLES  CALLES  CALLES  CONMUNICATIONS  CALLES  CONTRACTOR OF THE CHUTE AREA TION.  CALLES  CALLES  CONTRACTOR OF THE CHUTE AREA TION.  CALLES  CONTRACTOR OF THE CHUTE AREA TION.  CALLES  CONTRACTOR OF THE CHUTE AREA TION.  RECOV  CALLES  CONTRACTOR OF THE CHUTE AREA THAT IS EXTENDED  CONTRACTOR OF THE CHUTE AREA THAT IS EXTENDED  CONTRACTOR OF THE CHUTE AREA THAT IS EXPOSED  CONTRACTOR OF THE CHUTE AREA THAT IS EXTENDED		
COMMON / DENSITY COMMON BLOCK  CONMON / DENSITY COMMON BLOCK  CONMON / DENSITY / GRAVITY  COMMON / DENSITY / GRAVI		CHOILE PROJECTED AREA. THE CHOIL IS THEN ALTENED IN THE MIND TO COMPUTE COMPONENT EMPORES AND MOMENTS.
COMMUNICATIONS - COMMUNICATIONS - COMMUNICATIONS - COLIED BY: DROGUE - DROG		ELERATIONS AND VELOCITIES OF THE CHUIE ARE SET
COMMUNICATIONS COMMUNICATIONS COLLEGE BY: CALLED BY: CALLED BY: CALLED BY: CALLED BY: CALLES DEFINED COLLS:		AL TO THOSE OF THE SEAT/OCCUPANT, OR SEAT ALONE
C COMMUNICATIONS - C CALED BY: C CALES:		LOWING SEAT/OCCUPANT SEPARATION
CALLED BY:  CALLS:  RECOV  CALLS:  RECOV  CALLS:  NON-COMMON VARIABLE SDETINED  COMMON / FORCE TOTAL VECTOR THE CHUTE WITH THE WIND  COMMON / FORCE TOTAL VECTOR THE CHUTE WITH THE WIND  COMMON / FORCE TOTAL VECTOR THE CHUTE WITH THE WIND  COMMON / CONSTINT / GRAVITY RADDEG  COMMON / CONSTINT / GRAVITY RADDEG  COCCUPANT ALONE FORCE COMMON BLOCK  COCCUPANT ALONE FORCE COMMON BLOCK  COCCUPANT ALONE FORCE COMMON BLOCK  COMMON / FORCES COMMON BLOCK  COMMON		
CALLS:  CALLS:  ROTATE, ZARCTAN  CALLS:  CALLS:  ROTATE, ZARCTAN  CONN-COMMON VARIABLES DEFINED -  CONSTANT - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANGI - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANGI - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANGI - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  COMMON CONSTANTS COMMON BLOCK  CONTROL OF CONTROL	CALLED BY	
CALLS: CALLS: CALLS: CALLS: CONDITION OF THE CHUTE DIAMETER THAT IS EXTENDED CO DRAG COEFFICIENT C DRAG COEFFICIENT C DRAG COEFFICIENT C PERCITON OF THE CHUTE AREA THAT IS EXTENDED CD CD DRAG COEFFICIENT C PORCE - TOTAL PARACHUTE FORCE C ANGI - ANGIES USED IN ALIGNING THE CHUTE WITH THE WIND C CONSTANTS COMMON BLOCK C COMMON / DENSITY / IATMOS OLDALT(3) C DECUPANT ALONE FORCES COMMON BLOCK C COMMON / FORCES COMMON BLOCK C C C C C C C C C C C C C C C C C C C		
CALLS: CALLS: CALLS: ROTATEL, ZARCTAN  C NON-COMMON VARIABLES DEFINED  C DIAFRAC - TOTAL VELOCITY OF THE CHUTE AREA THAI IS EXTENDED  C DEAG COTEFFICIENT  C FRACTION OF THE CHUTE AREA THAI IS EXPOSED  C D- DRAG COTEFFICIENT  C FRACTION OF THE CHUTE AREA THAI IS EXPOSED  C D- DRAG COTEFFICIENT  R - TOTAL VELOCITY OF THE CHUTE WITH THE WIND  ANG1 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANG2 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  C DOTENTIAL ERROR CONDITIONS - NONE  C CONSTANTS COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD  C COMMON / DENSITY / JATMOS DIEMP  C DECLIPANT ALONE FORCES COMMON BLOCK  C COMMON / FORCED / FXCHOA(3) FYCHOA(3) FYCHOA(3)  C SEAT/OCCUPANT FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCED / FXCHOA(3) FYCHOA(3) FYCHO		60E2
COMMON / FORCES COMMON BLOCK  COMMON / FORCES COMMON BLOCK  COMMON / FORCE SOME FYLUS OF	STIF	
C NON-COMMON VARIABLES DEFINED - C AREACHU - FRACTION OF THE CHUIE DIAMETER THAT IS EXTENDED C CD - DAG COEFICIEN C CD - DAG COEFICIEN C CD - DAG COEFICIEN C ANGI - ANGLES USED IN ALIGNING THE CHUIE WITH THE WIND ANGI - ANGLES USED IN ALIGNING THE CHUIE WITH THE WIND ANGI - ANGLES USED IN ALIGNING THE CHUIE WITH THE WIND C DOTENITAL ERROR CONDITIONS - NONE C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / IATMOS C DECENDANT ALONE FORCES COMMON BLOCK C COMMON / FORCES COMMON BLOCK C COMMON FORCES COMMON BLOCK C COMMON FORCES COMMON BLOCK C COMMON FO		
C AREATION OF THE CHUTE DIAMETER THAT IS EXTENDED  C DRAG COEFFICIENT  C PORAG COEFFICIENT  C PORAGE - TOTAL PARACHUIE FORCE  ANG1 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANG2 - ANG1 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANG3 - ANG1 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  C POTENTIAL ERROR CONDITIONS - NONE  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG . DEGRAD  C COMMON / DENSITY / 147MOS . OLDALT(3) . RHOS  TEMPS  C COCUPANT ALONE FORCES COMMON BLOCK  C CCCUPANT FORCES COMMON BLOCK  C COCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES C FACASO(2) FYCASO(3) FYCASO(3	STATE OF A MONHOUS STATE OF THE	STATES AND A STATES A
C AREACHU - FRACTION OF THE CHUTE AREA THAI IS EXPOSED C D - DRAG COEFFICIENT C ANGI - ANGLES USED IN ALIGNING THE CHUITE WITH THE WIND ANG2 - C ANG1 - ANGLES USED IN ALIGNING THE CHUITE WITH THE WIND C ANG3 - ANGLES USED IN ALIGNING THE CHUITE WITH THE WIND C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG . DEGRAD C COMMON /CONSTANT / GRAVITY RADDEG . DEGRAD C COMMON /CONSTANT / GRAVITY RADDEG . DEGRAD C CCUPANT ALONE FORCES COMMON BLOCK C COMMON /FORCEOS / FXCHOA(3) . FYCHOA(3) . C SEAT/OCCUPANT FORCES COMMON BLOCK C COMMON /FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C COMMON /FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C SEAT/OCCUPAN	TAGRACIO	CHITE
C PORECTITY OF THE CHUTE C PEDRCE - TOTAL VELOCITY OF THE CHUTE WITH THE WIND C ANG1 - ANG1ES USED IN ALIGNING THE CHUTE WITH THE WIND C ANG2 - ANG3 - ANG1ES USED IN ALIGNING THE CHUTE WITH THE WIND C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C COCUPANT ALONE FORCES COMMON BLOCK C CCCUPANT ALONE FORCES COMMON BLOCK C CCCUPANT ALONE FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON FORCES CO	ADEACHII -	
C PFORCE - TOTAL VELOCITY OF THE CHUTE WITH THE WIND  ANG1 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  ANG2 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  C ANG2 - ANGLES USED IN ALIGNING THE CHUTE WITH THE WIND  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C COMMON /DENSITY / IATMOS . OLDALT(3) . RHOS . TEMPS . TEMPS . TEMPS . VXWIND . VYWIND . VZWIND  C CCUPANT ALONE FORCES COMMON BLOCK  C COCUPANT ALONE FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON FORCES	ייי	
C PFORCE - TOTAL PARACHUTE FORCE C ANG1 - ANGLES USED IN ALIGNING THE CHUIE WITH THE WIND ANG2 - CONDITIONS - NONE C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVITY RADDEG , DEGRAD , PI C DENSITY COMMON BLOCK C COCUDANT ALONE FORCES COMMON BLOCK C COCCUDANT ALONE FORCES COMMON BLOCK C COCCUDANT FORCES COMMON BLOCK C COCCUDANT FORCES COMMON BLOCK C SEAT/OCCUPANT BLOCK C SEAT/OCCUPA	90	1146
C POTENTIAL ERROR CONDITIONS - NONE C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C DENSITY COMMON BLOCK C COMMON /DENSITY / 1ATMOS . OLDALT(3) . RHOS . TEMPS	370030	BADACHITE CORCE
C POTENTIAL ERROR CONDITIONS - NONE C CONSIANTS COMMON BLOCK C CONSIANTS COMMON BLOCK C CONSIANTS COMMON BLOCK C COMMON / CENSITY / IATMOS OLDALT(3) C DENSITY COMMON BLOCK C C COMMON / DENSITY / IATMOS OLDALT(3) C DENSITY COMMON BLOCK C C C COMMON / FORCES COMMON BLOCK C C C C COMMON / FORCES COMMON BLOCK C C C C C C C C C C C C C C C C C C C	F ORCE	IAL TARACHUIC FONCE.
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANT COMMON BLOCK C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI C DENSITY COMMON BLOCK C C C C C C C C C C C C C C C C C C C	1000	GEES USED IN ALIGHING INC. CROIL WITH THE WIND
C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C DENSITY COMMON BLOCK C COMMON / DENSITY / IATMOS . OLDALT(3) . RHOS . TEMPS . VXWIND . VZWIND	C BOTENITAL EBBOD	ANON - SHOULT ONCE
C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY . RADDEG . DEGRAD . PI C COMMON /CONSTAT / JATMOS . OLDALT(3) C DENSITY COMMON BLOCK C C CCUPANT ALONE FORCES COMMON BLOCK C C CCUPANT ALONE FORCES COMMON BLOCK C C COCUPANT FORCES COMMON BLOCK C C COMMON /FORCEOA / FXCHOA(3) . FYCHOA(3) . FZAEOA C C SEAT/OCCUPANT FORCES COMMON BLOCK C C COMMON /FORCES COMMON BLOCK C C SEAT/OCCUPANT FORCES COMMON BLOCK C C SEAT/OCCUPANT FORCES COMMON BLOCK C C COMMON /FORCES COMMON BLOCK C C C C C C C C C C C C C C C C C C C	C TOTAL STATE CANON	
C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVITY RADDEG . DEGRAD . PI C DENSITY COMMON BLOCK C C COMMON /DENSITY / IATMOS . OLDALT(3) C DEMON /DENSITY / IATMOS . OLDALT(3)  TEMP		
COMMON / CONSTNI / GRAVITY . RADDEG . DEGRAD . PI C COMMON / DENSITY / IAIMOS . OLDALI(3) C COMMON / DENSITY / IAIMOS . OLDALI(3) FEMPS . TEMPS . VYWIND . VZWIND C C CCCUPANT ALONE FORCES COMMON BLOCK C C CCCUPANT ALONE FORCES COMMON BLOCK C C C C C C C C C C C C C C C C C C C	Contest of the section of	***************************************
COMMON /CONSTNT / GRAVITY RADDEG . DEGRAD . PI COMMON /DENSITY / IATMOS . OLDALT(3) . RHOS . TEMPS . TEMPS . VXWIND . VZWIND . VZWIND . COMMON /FORCES COMMON BLOCK . C. C	C CONSTANTS COMMON	
C DENSITY COMMON BLOCK  C COMMON /DENSITY / 147MDS . OLDAL1(3) . RHOS . TEMPS . VVWIND . VZWIND . VZWIND . VZWIND . VZWIND . COMMON /FORCES COMMON BLOCK . FZAEOA . FZAESO . FZLUBSO . FZLUBSO . FZLUBSO . FZLUBSO . FZAESO .	COMMON /CONS	NI / GRAVITY RADDEG DEGRAD PI
COMMON DENSITY COMMON BLOCK  COMMON /DENSITY / ITAMOS . OLDALT(3) . RHOS . TEMPS . VXWIND . VZWIND . VZWIND . VZWIND . COMMON /FORCES COMMON BLOCK . COMMON /FORCEOA / FXCHOA(3) . FYCHOA(3) . FZAEOA . FXAEOA . FZAEOA . FZAEOA . FZAEOA . FXAEOA . FZAEOA . FZAEOA . FXAEOA . FYCHOB(3) . FZAEOA . FXAEOA . FZAEOA . FZAEOA . FZAEOA . FXAEOA . FZAEOA	C	化二氯甲基苯甲甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲
COMMON /DENSITY / 14TMDS . OLDALT(3) . RHOS . TEMPS . VXWIND . VZWIND . VZWIND . VZWIND . VZWIND . COCUPANT ALONE FORCES COMMON BLOCK . COMMON /FORCEOA / FXCHOA(3) . FYCHOA(3) . FZEFOA . FXEFOA . FXEFOA . FZEFOA . FXEFOA . FXEFOA . FZEFOA . FXEFOA . FYCHOR(6) . FYRKSOI(6) . FYRKSOI(6) . FYRKSOI(6) . FZEFOA . FXEFOA . FXEFOA . FYRKSOI(6) . FYRKSOI(6) . FZEFOA . FXEFOA . FXEFOA . FZEFOA . FXEFOA . FYRKSOI(6) . FYRKSOI(6) . FZEFOA . FXEFOA . FXEFOA . FYRKSOI(6) . FYRKSOI . FYRKSOI . FYRESOI .	C DENSITY COMMON BI	DCK
COMMON / DENSITY / IAIMOS . GLDALITS) . RHOS . TEMP . RHOS . TEMP . VXWIND . VZWIND . VZWIND . VZWIND . COCUPANT ALONE FORCES COMMON BLOCK . COMMON / FORCEOA / FXCHOA(3) . FYCHOA(3) . FZEFOA . FXAEOA . FXAEOA . FZAEOA . FXAEOA . FZAEOA . FXAEOA . FZAEOA . FXAEOA . FZAEOA . FXAEOA . FZAEOA . FXAEOA . FZAEOA .		
TEMPS  VXWIND  C. OCCUPANT ALONE FORCES COMMON BLOCK  C. COMMON /FORCEOA / FXCHOA(3) . FYCHOA(3) . FZCHOA(3) .  C. SEAT/OCCUPANT FORCES COMMON BLOCK  C. SEAT/OCCUPANT FORCES COMMON BLOCK  C. COMMON /FORCESO / FXCHOA(3) . FYCHOA(3) .  FXAEOA . FXAEOA . FZCHOA(3) .  C. SEAT/OCCUPANT FORCES COMMON BLOCK  C. COMMON /FORCESO / FXCHOA(6) . FYCHOA(6) .  FXELOR(6) . FYCHOA(6) . FZCHOA(6) .  FXELOR(6) . FYCHOA(3) .  FXCHSO(6) . FYCHOA(3) .  FXCHSO(6) . FYCHOA(3) .  FXAESO . FYCHOA(3) .  FXAESO . FYAESO .  FXAESO .  FXAES	COMMON /DENS	JAIMUS , ULDALI(3) .
COCCUPANT ALONE FORCES COMMON BLOCK COCCUPANT ALONE FORCES COMMON BLOCK COCCUPANT TORCEOA / FXCHOA(3) FYCHOA(3) FZCHOA(3)  COMMON /FORCEOA / FXAEOA FXAEOA CSEAT/OCCUPANT FORCES COMMON BLOCK COMMON /FORCESO / FXCASOL2) FYCASOL2 / FZCASOL2 / FXLUBSO FXLUBSO FXLUBSO FXLUBSO FXLUBSO FXLUBSO FXCHSO(6) FYRKSOL6) FYRKSOL6 / FXLSOL6 / FXRKSOL6 / FYRKSOL6 / FYRKSO	•	. DIEMP
C OCCUPANT ALONE FORCES COMMON BLOCK  C OCCUPANT ALONE FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C SEAT/OC	<b>.</b>	
C OCCUPANT ALONE FORCES COMMON BLOCK C COMMON / FORCEOA / FXCHOA(3) . FYCHOA(3) . FZCHOA(3) . COMMON / FORCES COMMON BLOCK C SEAT/OCCUPANT FORCES COMMON BLOCK C COMMON / FORCES O / FXCASO(2) . FYCASO(2) . FZCASO(2) . FXLUBSO . FXLUBSO . FZLUBSO . FXLUBSO . FXLSO(6) . FXRKSO(6) . FXLSO(6) . FYRKSO(6) . FXRKSO(6) . FXLSO(6) . FYRKSO(6) . FXRKSO(6) . FXCHSO(3) . FYCHSO(3) . FZRESO . FXCHSO(3) . FYRESO . FXCHSO(3) . FYRESO . FXCHSO(3) . FYRESO . FXRESO . FYRESO .		ONIMAYA ONIMAYA
COMMON / FORCEOA / FXCHOA(3) . FYCHOA(3) . FZCHOA(3) .  COMMON / FORCES COMMON BLOCK  COMMON / FORCES COMMON BLOCK  COMMON / FORCES / FXCASO(2) . FYCASO(2) . FZCASO(2) .  FXLUBSO . FXLUBSO . FXLUBSO . FYLUBSO .  FXLUBSO . FXLSO(6) . FYRSO(6) . FXRSO(6) .  FXLSO(6) . FYRSO(6) . FXRSO(6) . FXRSO(6) .  FXCHSO(3) . FYCHSO(3) . FZCHSO(3) .  FXCHSO(3) . FYCHSO(3) . FXCHSO(6) .  FXCHSO(3) . FYCHSO(3) . FYCHSO(3) .  FXCHSO(3) . FYCHSO(3) . FYCHSO(3) .		
COMMON /FDRCEDA / FXCHDA(3) FYCHOA(3) FZCHOA(3)  C SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) FYCASO(2) FZCASO(2)  FXTUBSO FYLUBSO FZTUBSO FXTUBSO FYLUBSO FZTUSO(6) FXRKSO(6) FYRKSO(6) FXRKSO(6) FXCHSO(3) FYCHSO(3) FZCHSO(3) FXCHSO(3) FYCHSO(3) FZCHSO(3) FXCHSO(3) FYCHSO(3) FZCHSO(3)	C OCCOPANI ALONE FI	RCCS COMMUN BLOCK
C SEAT/OCCUPANT FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) FYCASO(2) FZCASO(2) FXLUBSO FYLUBSO FYLUBSO FYLUBSO FYLUBSO FXLUBSO FXLU	COOST NOMNOU	DA / EXCLUSION EXCLUSION
C SEAT/OCCUPANT FORCES COMMON BLOCK C COMMON /FORCESO COMMON BLOCK C COMMON /FORCESO FXTUBSO FXTRESO F	+ +	FXAEDA FYAEDA FZAEDA
C SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) , FZCASO(2) ,  COMMON /FORCESO / FXLUBSO , FXLUBSO ,  FXRKSO(6) , FYRKSO(6) ,  FXRKSO(6) , FYRKSO(6) ,  FXRKSO(3) , FYCHSO(3) ,  FXRKSO(6) ,  FXRKSO ,  FXRKSO(6) ,  FXRKSO(6	C	************
COMMON /FORCESO / FXCASO(2), FYCASO(2), FZCASO(2), FXUBSO + FXTUBSO   FXTUBS	C SEAT/OCCUPANT FO	CES COMMON BLOCK
FXTUBSO FYTUBSO (FXSLSO(6) FYSLSO(6) FYRKSO(6) FYCHSO(3) FYCHSO(3) FXCHSO(3)	Cook Monaco	**************************************
FYSLSO(6). FYRKSO(6). FYCHSO(3).	COMMON / LONCI	rations rations
FYRKSO(6) . FYCHSO(3) . FYAESO	•	10000
FYCHSD(3) . FYAESO	•	. 135.30(6)
FYAESO .	•	TYKKSU(6)
TARSO	•	) . FYCHSO(3) .
	•	

COMMON / MISC	COMMON /MATRIX	ATRIX /	DCMAE(3,3) . DCMSE(3,3) . DCMSAE(3,3) . DCMSAE(3,3) .	DCMRA(3,3) DCMTS(3,3) DCMDAE(3,3)	) , DCMSA(3.3) ) , DCMTE(3.3) 3), DCMSR(3.3)		
### PAGECT (31)   LINECT (31)   IPRTCN (31)   ### PAGECT (31)   MAXREPT   MAXEVNT   ### EDDSR   HEADALT   HEADVEL   ### EADROL   HEADWET   HEADVEL   ### EACEL (3)   YYCE   YYCE   YYCE   ### EACH   HEADVEL   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   ### EACH   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH   YYCE   YYCE   YYCE   ### EACH	C MISCELLANEOUS	DATA CO	MMON BLOCK	• •			
AXLINE	COMMON /M	/ 2S1	IPAGECT(31)		(31)	=	
EVLINE HEARLG LU  DATE HEADVAL HEADVEL  EADSR HEADVAT HEADVEL  EADROL HEADVAT HEADVIL  EADROL HEADVAT HEADVIL  EADROL HEADVAT HIAS  EPTYPE STINGT (38) TIMES (38)  RTMASS (2) PRTINDX PREWEL  VECT (3) XYT (3) SAVTIME  ACCEL (3) XYT (3) SAVTIME  RTMASS (2) YACCEL (3) PRTLINGT  RTWGHT PREWEL STORM (6) YSSORM (6) ZSSORM (6) ZSSORM (6) XSSORM (6) ZSSORM (6	+		MAXL INE	MAXREP	· -	MAXEVNT	•
DATE         HEADALT         HEADVEL           EADSA         HEADVAW         HEADPIT           EADROL         HEADWGT         BIAS           EADROL         HEADWGT         BIAS           EADROL         HEADWGT         PRTWGHT(2)           HEADWGT         PRTWGHT(2)         TIMES(38)           TIMES(24)         IEVENTS(38)         TIMES(38)           TRAGS(2)         YACCEL(3)         PRTRMC           YECLI(3)         YACCEL(3)         SAVTIME           ACCEL(3)         YACCEL(3)         SAVTIME           ACCEL(3)         YACCEL(3)         PRTLNGT           RTWGHT         PRTLNGS         PRTLNGT           RTEMP         YACCEL(3)         PRTLNGT           RTEMP         YACCEL(3)         CACCEL(3)           ZSSOGNE         YSSORK(6)         ZSSORK(6)           ZSSOGNE         XSSORK(6)         ZSSORK(6)           ZSSOGNE         XSSORK(6)         ZSSORR(6)           ZSSOSAC         XSSORR(6)         YSSORR(6)           ZSSOSAC         XSSORR(6)         XSSORR(6)           ZSSOSAC         XSSORR(6)         XSSORR(6)           ZSSOBR(6)         XSSORR(6)         XSSORR(6)           ZSSOS	*		I EVL INE	. IERRFL		2	•
EADSR HEADVAW HEADPIT EADROL HEADWAT BIAS EADROL HEADWAT BIAS HEADER(24) IEVENTS(38) TIMES(38) HEADER(24) IMVDC PRING(12) TIMES(38) HEADER(24) PRILNDX PAZVEL VEXVEL VAZVEL VAZVEL PRILNDX PALEMP(2) RTWASS(2) YAZ(3) ZACCEL(3) ZACCEL(3) EPTYPE BIAS PRILNDX PRILNGT RTWAHT PRING(6) ZASORK(6) ZASORK(6	+		IDATE	HEADAL		HEADVEL	•
EADROL  EPTYPE(5,31)	+		HEADSR	. HEADYA		HEADPIT	•
EPTYPE(5.31)   PRTLNGT(2)   PRTWGHT(2)     HEADER(24)   IEVENTS(38)   TIMES(38)     TIMES(38)   TIMES(38)   PRTEMP(2)     TIMES(2)   PRTINDC   PREVEL     VeCT(3)   XYZ(3)   SAVTIME     ACCEL(3)   XYZ(3)   ZACCEL(3)     EPTYPE   SAVTIME   PRTINDX     RTEMP   SAVTIME   PRTINDX     SSOGNE   XSSORE   XSSORE     ZSSORE   XRRDAP(2)   XSSORE     ZSSORE   XSSORE     ZSSORE   XSSORE   XSSORE     ZSSORE   XSSORE   XSSORE     ZSSORE   XSSORE     ZSSORE   XSSORE   XSSORE     ZSSORE   X	•		HEADROL	HEADWG		BIAS	•
HEADER(24) , IEVENTS(38) , TIMES(38)  RTMASS(2) , PRTINDX , PRZVEL ACCEL(3) , XYZ(3) , PRTINDX , PRZVEL ACCEL(3) , YACCEL(3) , ZACCEL(3)  EPTYPE	•		REPTYPE (5.31		1(2)	PRIWGHT (2)	•
TWADS (2)   PRITEMP (2)	•		THEADER(24)		5(38)	TIMES (38)	
RTMASS(2)	• •			JUNIU.		ı	•
March   Marc	•		(0))		-		•
### ACCEL(3)	•		PKIMASS(2)	DEL NA.	•	7777	-
RTEMP  RTWGHT  REFLNSA  RESORT  RESORT  RESORT  REFLNSA  RECOVE  R	•		2VEC1(3)	(6)314	-	3AV   1 ME	•
REFLNSA . BELAS . PRILINGS  REFLNSA . URX(6) . URY(6) . URZ(6) .  ZSSORRE . XSSORK(6) . YSSORK(6) . ZSSORK(6) .  ZSSORRE . XSSOBOT . YSSOBOT . ZSSORRE .  ZSSORRE . XSSOBOT . YSSOBOT . ZSSORRE . ZSSORP . ZSSORC . ZSCRAP . ZSCR	•		AACCEL(3)	, YACCEL		CACCEL(3)	
RTWGHT  RTWGHT  RTWGHT  RTEMP  REFLNSA  URX(6)  URX(6)  URZ(6)  ZSSOCA(2)  ZSSORRE  ZRSORC  ZSSORRE  ZRSORC  ZSSORC	INTEGER		REPTYPE	. BIAS	•	PRILNG	•
REFLNSA URX(6) , URY(6) , URZ(6) , 25.5GCA(2) , X.5SGRK(6) , Y.5SGRK(6) , Z.5SGRK(6) , Z.5SGRR	+		PRIMGHT	•			
REFLNSA URX(6) , URY(6) , URZ(6) , 2550GA(2), 2550GR(6), 7550GR(6), 2550GR(6), 2550GR(6)	•		PRTEMP	. PRIMAS	٠.	PRTINDX	
REFLNSA ZSSOCA(2) ZSSOCRE ZSSORRE ZRSORRE ZRSORRE ZRSORC ZRSORRE ZRSORC ZRSORRE ZRSORC ZRSOR	C*************************************	********	**********	٠	•••••		
REFLNSA .ZSSORRE .ZSSORRE .ZSSORRE .ZSSOSB(6) .ZSSOSB(6) .ZSSOSB(6) .ZSSOSB(6) .ZSSOSB(6) .ZSSOSB(6) .ZSSOSB(7) .ZS	C MOMARMS COMMON	4 BLOCK			4		
REFLNSA 2SSOCA(2) 2SSORRE 2SSORRE 2SSOBR(6) 2SSOBR(6) 2SSOSAC 2SSOSAC 2SSOBO(6) 2SSOSBC 2RSOSB 2RSOSB 2RSOS		******			•		
2550RRE 2550RRE 2550RRE 2550RRE 2550RRE 2550RRE 2550RRE 2550RP(2) 2580RP(2) 2780RSB	E	/ SMAKES		, , , , , ,	(9)	(0)(0)	
.2550RRE .2550RRE .2550RRE .2550RRE .2550RRE .2550RRE .2550RC .2750SR	7	, KELLINDA	, KELLNSA	UKA(B)	UKT (6)	, 08230,	
. ZSSORRE . ZSSORRE . ZSSORG 6 . ZSSOSR 6	2	YSSUCAL	2), 255UCA(2).	XSSURK(6),	Y SSUKK ( b )	. ZSSUKK(6),	
. ZSSOMRE . ZSSOSB(6) . ZSSOSB(6) . ZSSOSB(6) . ZSSOSB(6) . ZSSOSB(6) . ZRSOSB . ZRSOSB . ZRSOS . ZRSO		YSSURKE	. ZSSUKRE			, 2SSULKE	
. ZSSGSB(6) . ZSSGSBC . ZSSGSBC . ZRRSBO(6) . ZRSGSBC . ZRSGSC . ZRSGS	+ X S S O MRE	YSSOMRE	. ZSSOMRE			. 1080557	
. ZSSCSAC . ZSSASRP . ZSRSBO(6) . ZSRCSAC . ZSRCSAC . ZRRSBB . ZARCSO . ZRRSBB . ZRRCAC . ZRSOAC . ZRSOAC . ZRSOAC . ZRSOAC . ZRRCAC . ZRSOAC . ZRSOAC . ZRRCAC . ZRSOAC . ZRSOAC . ZRSOAC . ZRRCAC . ZRSOAC . ZRS	+XSSOSB(6)	, <b>YSS</b> 0SB(	5). ZSSOSB(6),			. ZRRCSAC .	
. 255A5RP . 255DAP(2) . 255DAP(2) . 255CSAC . 278CSB . 278CSB . 278CSB . 278CSB . 278CSB . 278CSB . 278CG . 27		, YSSCSAC		•		. ZSSOSRP	
ZSSASRP ZSRSBO(6) ZSSDAP(2) ZSSDAP(2) ZRSCSAC ZRSCSAC ZRRSCSAC ZRR	+					ZARMPE ,	
. ZRRSBO(6) . ZSRCSAC . ZRRSBB . ZRRSBB . ZARCSO . ZRSOAC . ZRSOAC		VSSACDO		x (c)dyudax	(C) GVUGGA	7DDDAD(2)	
. ZSSOBAP(2) . ZSRCSAC . ZRSOSB . ZRSOS . ZRSOAC . ZRSOAC	- AND COURT	200000		1 (4) 300000	(0) 00000	7000000	
ZSSUAP(22) ZSSCSAC ZRSOSB ZRRSOSB ZRACSO ZRSOAC ZRSOAC ZRSOAC PSSOAC PSSOAC PTSRF PTSRF PROGUE OROSD2 PTDF T2 PTDF T2 PTDF T2	TAKE SECTION	TRRSBUC	, (a) Ogenaa, (a)	1330CF (2).	1 SOUCE ( 2 )	, (2) JOSE 7,	
ZSRCSAC ZRSOSB ZAACSO ZRSOAC ZRSOAC ZRSOAC PECONAG RECAP PTSRET DROGUE DROSD2 PTDET12 PTDET12	+X5SUAP(2),	YSSUAP(	. 255DAP(2)	٠		. ZESUAC .	
ZRSOSB ZRRSB ZRACSO ZRSOAC ZRECOV ECCRAG PTSRLS PTSRLS PTSRLT DROGUE DROGUE PTDFTZ PTDFTZ PTDFTZ		YSRCSAC				ZSSOAC .	
ZAACSO ZAACSO ZAACSO CACSO CCCO RECOV RECAP PTSREL DROGUE OROSD2 PTDETT2 PTDETT2		VOSOS				ZRRSBOT	
ZARSSB ZARSGAC ZARSGAC SECOV ECDRAG PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS					200000	(0)100000	
ZAACSO ZRSOAC ZRSOAC ECCRAG PTSRLS PTSRLS PTSRFT PTDFT2 PTDFT2 PTDFT3		TKK30		ASSUCE 37.	13300013	, ( S ) DOC 1	
ZRSOAC RECOV RECORAG RECAP PTSRFT DROGUE DROSD2 PTDFT12 PTDFT12 PTDFT13		YAACSD		XASOAC .	YASOAC	ZASOAC .	
RECOV ECDRAG PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS PTSRLS		YRSDAC		XSCPAP(2),	VSCPAP(2)	. ZSCPAP(2)	
RECOV , REDPLO RECOVE RECOVE PTSRLS . RECOVE PTSRLS . RECOVE DROGUE . DRORAG OROSD2 . VELCON PTDFT12 . DROGFT PTDFT14 . DROGFT PTSDLS . DROGLS	•••••••		********	********	*******	**********	* * * * *
RECOV TRDPLOY RECAP PLOY RECAP PLOSE RECOVED PTSRLS RECOVET(2.25) PTSRLS RECOVET(2.25) RECOVET(2.25) RECOVET PTSRLS PTDFT PTDF	C SECTION 14 CON	O IN NOM	<b>&gt;</b>				•
COMMON /PARCHUT / IRECOV	C SECTION 14 CO.			4			4
RECORAG   RECOVED     RECAP   RECOVED     NRECAP   RECOVED     NRTSRIS   RECOVET(2.25)     NRTSRIT   RECOVET(2.25)     NRTSRIT   RECOVET(2.25)     NRTSRIT   RECOVET(2.25)     NRTSRIT   NRTSRIS   NRTSRIS     NRTSRIS   NROGETICE     NRTSRIS   NRTSRIS     NRTSRIS   NROGETICE     NRTSRIS   NRTSRIS     NRTSRIS   NRT						•	
RECOVPD RECOVE(2.25) RECOVET(2.25) RECOVET(2.25) DRDRAG2 VELCON VELCON DROGFT2(2.25) DROGFT1(2.25) DROGFS(2.25)	COMMON /PA	KCHO! /	INECOV	י אמארי		KECOVEL	-
YECAP RECOVES(2.25) RECOVET(2.25) DROBAG2 VELCON DROGFT2(2.25) DROGFT1(2.25) DROGFS(2,25)	+		RECDRAG	. RECOVPI	٠ م	POROSR	-
RECOVLS(2.25)	•		XRECAP	, YRECAP		ZRECAP	•
RECOVET(2.25)	•		NPTSRI S	RECOVI	0	TFTRECV	
. DROGFT (2,25)				110010		1001010	•
DRORAG2 . VELCON . DROGFT2(2.25) . DROGFT1(2.25) . DROGI S(2,25)	•		NA CAL	. KELUVI	7.7	SEPTRUE	•
. VELCON . DROGFT2(2,25) . . DROGFT1(2,25) . . DROGLS(2,25) .	•		IDROGUE	. DRDRAG:	~	DROGPD2	
DROGFT2(2,25) DROGFT1(2,25) DROGLS(2,25)	+		POROSD2	VELCON	•	1FTDR02	•
DROGET1(2,25) , DROGLS(2,25) ,	•		NPTOFT2	DROGET	5(2 25)	1 F T D R D 1	
DROGLS(2,25)	•		NOTOFT	DOOGET	1(2 28)	1 Dodgi S	•
, DRUGLS(2,25)					. (62.2)	2000	•
	•			4 .1 666			

	125   DROUGLY   DROUGLE						
		ď	•	DROGPD 1	POROSO1	. DROVELX	
		,	•	Y I SOUND	CROVELZ	XDROGAP	•
			•	מאסארני			
			•	YDROGAP	ZDRUGAP	CHALL .	
			•	CHALT?	G. LMIT	TDFLAY	
			•	9 - 18 - 10	00100	1001	
			•	AKEADC	)		•
		•	•	TEDO	TFP3	TOROGLS	
		•	•		1000101	CCATOMOTOR	
			*	CDDC	•	, KECUVDI (2.2	
				************	;	*******	٠
				ACC TO HOMBOS			•
			C INTEGRALIUN RUULING	COMMON BLOCK			
			****** O		•		•
		ď	COMMON /RKUTTA	/ TIME . TIME		TRAUSD(193)	
		,	The second of th	(601)431464		TOA.ICH(07 2)	
			•	LKAUSE (195)	•	TO THE PROPERTY OF	
			+	TRAUAC( 193)	•	QUATSO(65)	
			•	CHATSA(RS)		OUATAC(65)	
				TALE OF THE		IDVDACS	
			•	1	. IFCFA33	77444	
		0	+	IPOINTS	×	. IYPRX	
			•	IKX	IKSUMX	IKPASSX	
				>	XTIAL	XCIAL	•
			•	V1.1	C 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	7 4 6 7 7	•
			*	1413X	LINALI.	V. 1841	•
			•	I Y PR 12X	I PY I X	. IPYI 1X	
				XIXI	XIIX	IREIN	
		•		<b>41.71</b>	•		• • • • • • • • • • • • • • • • • • • •
				**********	:		•
			C TORQUE OCCUPANT ALO	NE COMMON BLOC	¥		•
				***********	************	**************	*****
			4000E7 1100mm00	( , , , , , , , , , , , , , , , , , , ,	TACCHOA(3) TA	(6)4000	
			COMMON / LONGON		•	. (6) 400	
		_	*	TLAEDA .	IMAEOA . IN	1E U A	
				***********	************		•
			C TORQUE SEAT/OCCUPAN	I COMMON BLOCK			•
			C	***********	********	*******	****
			OSCHOOL ACAMON	/ TICASD(2)	TMCASD(2)	2ASO(2)	
			DO NOTEDO		( CO		
		_	•	. LIUBSU	•		
			•	TLSLS0(6)		St. SO(6) ,	
			•	TIPKSO(6)	_	2K SO(6)	
			•	0000000			
			•	11 CHSD(3)		. (5.)0517	
			•	TLAESO .		AE 50 .	
			•	11.08150		DRT 50	
				*****			*****
C SECTION 4 CUMMON BLOCK  C COMMON / IAIRCRI / IEMP , PRESSUR, ZACVEL , XPOS , VPOS	C SECTION 4 CUMMON BLUCK  C COMMON / IAIRCRI / IEMP			700			•
COMMON / IAIRCRI / IEMP , PRESSUR, ZACVEL , XPOS , YPOS + TAALL , YTAIL , ZTAIL , YAW + PITCH , ROLL , YTAIL , ZTAIL , YAW + PITCH , ROLL , RVEL , OVEL , PVEL , DENSITY , WINDY , WINDZ , XACVEL , CKPITH + IACSFLG	COMMON / IAIRCRI / IEMP PRESSUR.  2 POS XTAIL.  PITCH ROLL.  MINDX WINDY  MINDX WINDY  1 ACSFLG  C DIAFRAC = DP  IF(ICHUTE-2) 10, 15, 20  C O = DRDRAG1  GOIO 25  C 15 IF(IEVENIS(23) EQ. 0) DIAFRAC - DIA  15 IF(IEVENIS(23) EQ. 0) DIAFRAC - DIA		C SECTION 4 COMMON B	LOCK			•
COMMON / IAIRCRI / IEMP	COMMON / TAIRCRI / TEMP		••••••		*****		,
### ##################################	2POS XTAIL.  PITCH ROLL  PITCH ROLL  PITCH ROLL  PITCH ROLL  TALEST POE 140.510 PESSITY NPISARI.  C DIAFRAC = DP  IFLICHUIE: 2) 10, 15, 20  C 10 IFLICHUIS(20) EQ 0) DIAFRAC - DIA  CD = DRDRAGI  GOIO 25  C 15 IFLIEVENIS(23) EQ. 0) DIAFRAC - DIA		COMMON / TAIRCRI				•
C DIAFRAC = DP  IF (ICHUTE - 2) to, 15.20  C 10 IF (IF VENTS (20) EQ 0) DIAFRAC - DIA  CO = DRDRAG1  GO 0 0 DRDRAG1  CO = DRDRAG1	C DIAFRAC = DP TCH			•		•	
+ PITCH + ROLL .  ** WINDX : WINDY :  ** DIAFRAC # DP  ** IACSFLG  ** FITCHUTE-2)***  ** C DIAFRAC # DP  ** TO IF(IEVENTS(20) 60 0) DIAFRAC - DIAF	+ PITCH . ROLL	•	•				
# WINDX . WINDY .  # DENSITY NPISARI.  # DAFRAC = DP  # IFLICHUTE - 2	# WINDX , WINDY .  # DENSITY, NPISANT,  # DENSITY, NPISANT,  # IACSFLG  # DIAFRAC # DP  # IF(ICHUTE-2) 10, 15, 20  # C		+		. RVEL	٠	
C DIAFRAC = DP	C DIAFRAC = DP		•		* GN 2 3	=	
+ DENSITY, NPISAAL,  C DIAFRAC = DP  IFITCHUTE-2) to, 15,20  C 10  FITCHUTE-2) to, 15,20  CD = DRDRAG1  GOTO 25  C 15  FITCHUTE(23) EQ. 0) DIAFRAC - DIA  CD = DRDRAG2  GUTO 25  GUTO 25	+ DENSITY, NPISABL,  - DIAFRAC = DP  - IF(ICHUTE-2) 10, 15, 20  - CD = DRDRAG1  - GOID 25  - CD = DRDRAG1  - GOID 25  - CD = DRDRAG1  - CD = D		•				
C DIAFRAC = DP IFLICHUTE-2) tO, 15,20 C 10 IFLICHUTE-2) tO, 15,20 C = DRDRAG1 G010 25 C 15 IFLIEVENTS(23) EQ. 0) DIAFRAC - DIA CD = DRDRAG2 GUIO 25 CU = DRDRAG2	C DIAFRAC = DP		*			). NPISLAI LAICA.	. 106
C DIAFRAC = DP IF(ICHUTE-2) to, 15.20 C 10 IF(IFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GOIO 25 C 15 IF(IFVENIS(23) EQ. 0) DIAFRAC CD = DRDRAG2 GOIO 25	C DIAFRAC = DP		•	IACSFIG			
C DIAFRAC = DP IFIICHUTE-2) tO, 15,20 C 10 IFIIFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GD10 25 C 15 IFIIEVENIS(23) EQ. 0) DIAFRAC CD = DRDRAG2 GU10 25	C DIAFRAC = DP IFITCHUTE - 2) to, 15.20 C 10 IFITEVENTS(20) EQ 0) DIAFRAC CD = DRDRAG1 GOID 25 C 15 IFITEVENTS(23) EQ. 0) DIAFRAC						
DIAFRAC = DP  IF (1CHUTE - 2) to, 15.20  C	DIAFRAC = DP  IFIICHUTE:2)10,15,20  C 10 IFIIFVENIS(20) EQ 0) DIAFRAC  CD = DRDRAG1  GO10 25  C 15 IF(IEVENIS(23) EQ. 0) DIAFRAC	_	U				
FFITCHUTE 2 10, 15,20   C	FFITCHUTE 2 1 10, 15, 20   C   O   D   T   C   O   D   D   D   D   D   D   D   D   D						
C 10 IF(IFVENIS(20) E0 0) DIAFRAC CD = DRDRAG1 G010 25 C 15 IF(IFVENIS(23) E0. 0) DIAFRAC CD = DRDRAG2 GU10 25	C 10 IF(IFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 G010 25 C 15 IF(IEVENIS(23) EQ. 0) DIAFRAC		Of C. STIMOTOR	76			
C 10 IF(IFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GD10 25 C 15 IF(IEVENIS(23) EQ. 0) DIAFRAC CD = DRDRAG2 GU10 25	C 15 (TEVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GO10 25 C 15 If(IEVENIS(23) EQ. 0) DIAFRAC			07.61			
10 IF(IFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GOTO 25 C 15 IF(IFVENIS(23) EQ. 0) DIAFRAC CD = DRDRAG2 GUTO 25	10 IF(IFVENIS(20) EQ 0) DIAFRAC CD = DRDRAG1 GG10 25 C 15 IF(IEVENIS(23) EQ. 0) DIAFRAC						
CD = DRDRAG1 GD10 25 C 15 IF(IEVENIS(23) EQ. CD = DRDRAG2 GU10 25	CD = DRDRAG1 G010 25 C 15 IF(1EVENIS(23) EQ.		10 1F (1F VENTS (20)			11/(161)SIMII IMI	
G010 25 C 15 If(IEVENTS(23) EQ. CD + DRDRAG2 G010 25	G010 25 C 15 IF(IEVENIS(23) EQ.		TO THE DEPORT OF				
C	15 IF(TEVENTS(23) EQ.		CO100				
CD + DRDRAG2 CD + DRDRAG2 CD + DRDRAG2 CD + DRDRAG2	15 IF ( TEVENTS (23) EU.						
15 IF(IEVENTS(23) EQ. (1) = DRDRAG2 6010 25	IF ( IEVENTS(23) EQ.						100
			15 IF (IEVENTS(23)		C . DIAFRAC. (1)	IME - 1 IMES (22 ) ) / 1 P	174
	CD = 0800AG2		COAGOOO . US				
			**************************************				
		_	u010 25				
	•	•					
,							

```
47
PAGE
09.41.53
83/11/07
                                                                                                                                                                                          C CALCULATE CHUIE FORCES, ROTATE FORCE ARRAY, AND ASSIGN FORCE PARAMETERS CONTROL OF CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ·:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WRITE(5, #10)
## FORMAT(2x,//72(1H+)/.4x,"FATAL ERROR(SUBROUTINE CHUTFM)***

+"R EQUAL TO ZERO RESULTS IN DIVISION BY ZERO",/.72(1H+))

IERRFLG = #
FIN 4 6:428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TLCHDA(ICHUTE) = YSSOCH(ICHUTE) • FZCHDA(ICHUTE)

ZSSOCH(ICHUTE) • FYCHDA(ICHUTE)

TMCHDA(ICHUTE) • FXCHDA(ICHUTE)

XSSOCH(ICHUTE) • FXCHDA(ICHUTE)

XSSOCH(ICHUTE) • FXCHDA(ICHUTE)

YSSOCH(ICHUTE) • FXCHDA(ICHUTE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IRAJCH(5,ICHUTE) = TRAJDA(5)
TRAJCH(6,ICHUTE) = TRAJDA(6)
TRAJCH(7,ICHUTE) = TRAJDA(7)
GDTO 500
0PT = 1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               500 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RETURN
END
    SUBROUTINE CHUTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0 0 0 0 0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ပ
                                                                                                                                                                                                   230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                260
```

PAGE

-	Subrouting CLEAR C ************************************
ស	COMMUNICATIONS CALLED BY
ō	
ស្	C TO BE DEFINED C TO BE DEFINED C COEFFICIENTS (USED IN SUBROUTINE AFROIN) COMMON BLOCK
8	COMMON / CDEF / CDEF (100,6)  EQUIVALENCE (VCDEF (1,1))  DIMENSION VCDEF (4200)
255	C CONSTANTS COMMON BLOCK C
90	C DENSITY COMMON BLOCK C***********************************
35	CONTINUE CON
0	٠ž
5	EQUIVALENCE (VDYN(11) , WY) DIMENSION VDYN(14) C
50	COMMON /DYNCGVE / CGVAL(6) . CADERVES).  COMMON /DYNCGVE / CGVAL(6) . CADERVES).  CGGAO . YCGOAO . ZCADAO .  EQUIVALENCE (VDYNVE) . XCGOAO)
S S	C DYNAMIC RESPONSE INDEX VARIABLES COMMON BLUCK C COMMON / DRIVAB / DRIVAL(2), DRIDERV(2), ACCEL1

+ DRI , DRIMAX , TMAX ,  - ZACCMAX , DRICON + - EQUIVALENCE (VDRI(1) , ACCEL1)
COMMON /FORCEDA / FXCHDA(3) , FYCHDA(3) .  FXAEDA , FYAEDA , FZAEDA , FXCHDA(1) , FXCHDA(1
C.SET ALONE TOTALS COMMON DECOMMON / FORCES / FYRESA , FZRESA , FZRESA EQUIVALENCE (VFSR(1) , FXRESA)
C SEAT/OCCUPANT FORCES COMMON BLOCK C
FXRESG(6) : FYRESG(6) : FYRESG(6) : FXRESG(3) : FYRESG(3) : FYRESG(3) : FXRESG : FYRESG : FXRESG(1) : FXR
COMMON /IAIRCRI / IEMP PRESSUR. ZACVEL XPOS YPOS  TOOS XIAII YAII YAU  TOOS XIAII YAII YAU  H PITCH ROII RVEL PVEL  WINDX WINDY XACVEL CKPITHI  DENSITY NPISAAI AAI(4,50) NPISLAI (4.50).
+ IACSFLG EQUIVALENCE (VIAIR(!) . TEMP) EQUIVALENCE (VAAT(!) . AAT(!.1) EQUIVALENCE (VLAT(!) . LAT(!.1)) OIMENSION VIAIR(2!) . VLAT(200)
C SECTION 9 COMMON BLOCK C
(VICAT(1) CATHRET(1,1)  (VICAT(1) CATHRET(1,1))
EQUIVALENCE (VICAT3(1), KTUBE)  DIMENSION VICAT(12), VICAT2(100), VICAT3(5)

115 120 135 140 150 150	COMMON / ICONIRL / 151ART 1510P ESTOP INCISTED I
165	RKIOUT(1, 1, 1))
170	COMMON /IROCKFT / INRKT . RKDFLY(6), RKNDTS(6), IROKOUT . + RKIGN(6), RKWGH1(6), RKBURN(6), ISTAR(6) .

245	+ +	REPTYPE(5,31 IMEADER(24)	· .	, PRIWGHT(2) , TIMES(38)	
က္	•	IMEADER (24		TIMES(38)	
رن د		TY COOK TIES	•	ODIENO( ))	
മ			A 11. 100 0	(c /onition	
w.	+		JOAN I	L L W L L	•
ر د	•	DOTMASS(2)	YUNTIO	DK 7VE	
n		100000000000000000000000000000000000000		33.574.	-
	•	7 VEC 1 (3)	161214	SAVIJME	
	*	XACCEL(3)	. YACCEL(3)	. ZACCEL(3)	
	INTEGER	REPTYPE	BIAS	PRILNGT	
	*	PRIMGHI			
	•	PRIEMP	PRIMASS	XONITAG	
250	FOLLVALENCE	KMISCLE) IPAGE	IPAGECT(11)		
	TOTAL TAXABLE IN	-			
	EUDIVALENCE	-	111		
	FOUTVALENCE	(KMISC2(1), 1HEA	IHEADER( 1)		
	FOUT VALENCE	(VMISCOCI) DKZ	DK 7VF1 1		
	u S	٠		٠	
255	DIMENSION	· -	VMISC(7) . KMISC2(101)	KMISC2(101), VMISC2(17) .	
	+	_			
	O****************	********	******************	***********	* * * *
	C MOMARMS COMMON BLOCK	LOCK			•
	**************************************	***************	**************	************	***
260	COMMON / MOMARMS /	/ SM2			
				(2)1011	
		KEFLNUA , KEFLNSA	UKALEJ , UKYLEJ		
	+XSSOCA(2), YSS	, VSSOCA(2), ZSSOCA(2)	. ZSSOCA(2), XSSORK(6), YSSORK(6)	6), ZSSDRK(6),	
	+XSSORRE YS	YSSORRE , ZSSORRE	XSSOLRE YSSOLRE	. ZSSOLRE .	
				•	
785	6	2	•	•	
		00000000000000000000000000000000000000	•	•	
	+ 455C5AC . 155	. YSSUSAU . ZSSUSAU	ASSUSAP TASSUSAP	٠	
	+XSSASRP ,YSS		.XRRDAP(2),YRRDAP(2)	2),ZRRDAP(2),	
	+xagsgo(6) yag	YRRSBO(6) ZRRSBO(6)	XSSOCP(2) YSSOCP(2)	2) 7SSOCP(2)	
270	AXCCIARIO Y		XESOAC VESOAC		
	777 44400000	10000 TOOOD TOOOD TOO			
	ر	٠	•	•	
	+XRSOSB ,YRS	, YRSOSB , ZRSOSB	.XRRSBOT ,YRRSBOT	, ZRRSBOT .	
	+XRRSB YRRSB	SSB ZRRSB	XSS0CH(3), YSS0CH(3)	3), ZSSOCH(3),	
	_	٠	XACOAC VACOAC		
			State of the state		
2/3	+AKSUAC , YKS	۲	. ASCHAPIZI. TSCPAPIZI	2), 25CPAP(2)	
	<u>س</u>	-	REFLNSO)		
	DIMENSION	VMOMARM( 166)			
	:	************	• • • • • • • • • • • • • • • • • • • •	***********	:
	C SECTION 14 COMMON BLOCK	N BLOCK			•
280	C.	******	:	•	::
	COMMON /PARCHUT /		, TROPLOY	. RECOVLL	
	•	RECORAG	, RECOVPD	. POROSR	•
	•	XDECAP	YRECAP	ZBECAP	
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-
	•	NP I SKLS	. KECUVLS(2,25)		
285	•	NPTSRFT	, RECOVFT(2,25)	. SEPFRCE	

```
53
 PAGE
  83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMON /TORQUA / TLCHDA(3), TMCHDA(3), TNCHDA(3),

FLAEDA TLAEDA TMAEDA

EQUIVALENCE (VTORQUA(1), TLCHDA(1))

DIMENSION VTORQUA(1),

CONTROL SEAT ALONE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                        C INTEGRALION ROUTINE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RECOVDT (2, 25)
                                                                                                                                                                                                                                                                                                                                                                                                                    TRAJCH(97,3)
QUATSO(65)
QUATAC(65)
                                                                                                                                                                                                                                                                                                                                       , xDISP , YDISP
                                                                                                                                                                                                                                                                                                                                                                                                       , TRAUSO( 193)
                                 0R0GP02
1F TDR02
FF TDR01
                                                                 I DROGL S
TODPL OY
  FIN 4 6+428
                                                                                                                                                          TOROGLS
                                                                                        DRORAGI
                                                                                                   DROVELX
                                                                                                              XDROGAP
                                                                                                                         CHAL 11
                                                                                                                                    TOELAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                      IRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IYPRI 1X
                                                                                                                                               TFP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IYPRX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IVI2X
                                          VELCON
DROGF T2(2,25)
DROGF T1(2,25)
DROGLS(2,25)
                                                                                                                                                                                                                                                                        . VPAR2(50) . VPAR3(51) . VPAR5(50)
                                                                                                                                                                                                                                                                                                                                                                                                                   . TRAJOA(193)
, TVCEQS(225)
, QUATDA(65)
                                                                                                   POROSD 1
                                                                                                              DROVEL 2
                                                                                                                          ZDROGAP
                                                                                                                                    GL IMI I
WGHTDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPCPASS
                                                                                        DROGLL
                                                                                                                                                                                                                                                                                                                                      . FZR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IYPRIX
                                                                                                                                                                                                                                                                                                                                                                                                           COMMON /RKUITA / TIME , TIMES , DELTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IKSUMX
                                                                                                                                                         TFP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1Y11X
                                                                                                                                                                                           RECOVES(1,1))
RECOVET(1,1))
                                                                                                                                                                                                                 EQUIVALENCE (VPARS(1), DRDRAG2)
EQUIVALENCE (VPARS(1), DROGFT2(1,1))
EQUIVALENCE (VPARS(1), DROGFT1(1,1))
EQUIVALENCE (VPARS(1), DROGLS(1,1))
EQUIVALENCE (VPARS(1), RECOVDI(1,1))
                                                                                                                                                                                                                                                                                             VPAR7(73), VPARB(50)
                                                                                                                                                                                                                                                                                                                                        COMMON /RAILVRB / FXR , FYR EQUIVALENCE (VRAIL(1), FXR) DIMENSION VRAIL(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . INTSTP)
                                                                                                                                                                                                                                                                                                                                                                                                                   TRAUSA (193)
TRAUAC (193)
QUATSA (65)
INTSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EQUIVALENCE (VRKUT(1), TIME)
                                                      NPTDF11
NPTDF11
NPTSOLS
DISPLOY
DROGED1
VDROGAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IYPRI2X
                                                                                                                                     CHAL 12
ARE ADC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ICYLX
                                                                                                                                                                                                                                                                                                                    C+RAIL VARIABLES COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IVI3X
                                                                                                                                                           TFP2
                                                                                                                                                                                                      (VPAR3(1)
(VPAR4(1)
(VPAR5(1)
                                                                                                                                                                                                                                                                          VPAR(8)
                                                                                                                                                                                                                                                                                  VPAR4(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EQUIVALENCE (KRKUT(!)
                                                                                                                                                                                             (VPAR2(1)
                                                                                                                                                                                  (VPAR(1)
   0PT = 1
  74/74
                                                                                                                                                                                   EQUIVALENCE
                                                                                                                                                                                             EQUIVALENCE
                                                                                                                                                                                                       EQUIVALENCE
                                                                                                                                                                                                                                                                          DIMENSION
     SUBROUTINE CLEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   340
                                                                                                                                                                                                                                                                                                           310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            335
                                                                                290
                                                                                                                                       295
                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                  315
                                                                                                                                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325
                                                                                                                                                                                                                                                     305
```

2	COMMON / TOROSA / TLAESA , TMAESA , TNAESA  EQUIVALENCE (VIOROSA(1) , TLAESA)  DIMENSION VIOROSA(3)  C TOROUE SEAT/OCCUPANT COMMON BLOCK  C COMMON / TOROSO / TLCASO(2) , TNCASO(2) ,  TLIUBSO , TMTUBSO , TNRESO(6) ,  TLESSO(6) , TMRESO(6) , TNRESO(6) ,  TLAESO , TMRESO(6) , TNRESO(6) ,  TLAESO , TMAESD , TNCHSO(6) ,  TLAESO , TMAESD , TNCHSO(3) ,  C THRUST VECTOR CONTROL VARIABLES COMMON BLOCK ,  C THRUST VAR
<b>36</b> 5	(3)
370	/TITLES / SENSNAM(40.6), TEXT1(6), FXT3(3), BAUD (15.173(2), NSASDR(2), TIMINT (15.173(2)), TIMINT (15.173(2))
375	INTEGER 1EXT1 . TEXT2 . TEXT3
380	C D0 10 1=1.4200 VCDEF(1) = 0.0 10 CONTINUE

1DYNCG = 0
00 35 1=1,2
DRIVAL(1) \* DRIDERV(1) = 0.0
35 CONTINUE
DD 40 1=1,14
VDYNL1) = 0 0
40 CONTINUE

382

D0 20 [#1,4 VCONST(1) = 0.0 20 CONTINUE

385

IATMOS = 0 00 30 f=1,12 VDENS(1) = 0.0 30 CONTINUE

```
PRIINDX = 0
IPHASE1 = IPHASE2 = IPHASE3 = 0
00 230 I=1,101
KMISC2(1) = 0
KMISC2(1) = 0
KMISC(1) = 0
VINFO(1) = 0.0

IF(1 GT 36) G0T0 130

KINFO(1) = 0

IF(1 GT 12) G0T0 130

1AERCSO(1) = 0

130 CONTINUE
                                                                                                                                                                                                                                                     DO 170 1:1.354
VIROCK(I) = 0.0
IF(I GT. 13) GOTO 170
KIROCK(I) = 0
                                                                                                                                                                                                                                                                                                                       IPCNTL = 0

D0 180 1=1,24

VISEATO(1) = 0.0

180 CONTINUE
                                                                         RAILNIH = 0.0
RAILANG = 0.0
ISTRL = 0
NSLBKS = 0
DO 140 I=1.28
VIRAIL(I) = 0.0
                                                                                                                                                                                                                                                                                                                                                                            DO 190 I=1,24
VISEATA(I) = 0.0
190 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                       11VC = 0

DO 200 I=1,8

VITVC(I) = 0.0

200 CONTINUE
                                                                                                                                                                                                           DD 160 1=1,300
VIRKT(1) = 0.0
160 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DD 210 I=1,11
VMASS(1) = 0.0
210 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00 220 I=1.90
VMATR(I) = 0.0
220 CONTINUE
                                                                                                                                                               DO 150 I=1,31
KIREP(I) = 0
150 CONTINUE
                                                                                                                                                      ပ
                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                   ပ
                                                                                                                                           470
                                                                                                                                                                                                  475
                                                                                                                                                                                                                                                                                                                                                                  490
                                  460
                                                                                       465
                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         510
                                                                                                                                                                                                                                                                                                              485
                                                                                                                                                                                                                                                                                                                                                                                                                         495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    605
```

IF(1 GT, 17) G0T0 230 VMISC2(1) = 0.0 IF(1 GT, 7) G0T0 230 VMISC(1) = 0.0 IF(1 GT, 4) G0T0 230 VMISC3(1) = 0.0	CONTINUE DO 240 I=1,1 VMOMARM(I) =	~ (°	PLTIME(1) = 0.0  245 CONTINUE  ICATOUT = IROKOUT = 0  IRECOV = 0  IFTRECV = 0  NPTSRET = 0	M 4 4 4 4 4	S = S = 1 = 1 = 1 = 1 = 1 = 1 = 1 = 1 =	PAR3(1) = 0.0 PAR8(1) = 0.0 F(1, G7, 50) G070 PAR2(1) = 0.0	ARG(1) x (1 GT 8 AR(1) = C (1 GT 4	NUE 0 1=1.5 (1) = 0 NUE	DO 270 I=1,1551 VRKUT(I) = 0.0 IF(I GI 21) GOTO 270 KRKUT(I) = 0 270 CONTINUE	DO 280 I=1.12 VTORODA(I) = 0.0 280 CONTINUE
	ິ້ບ ່	<b>'</b>	N						۰ ن ن	
ž.	<b>5</b> 20	525	530	535	540	545	550	<b>ភ</b> ភភ	565 565	570
ហ	20	N)	co C	(C)	r.	S.	យ	r.	n n	ī.

DG 300 1#1, 160 VTOROSO(1) = 0.0 300 CONTINUE 17VCFLG = 0 DO 310 1=1,20 VTVCF(I) = 0,0 C RETURN END 580

PAGE

FUNCTION - LEVEL 3  FUNCTION - COMPUTES THE FORCES AND MOMEMIS OF THE DART CONFLUENCE  METHOD - VECTORS FROM THE LEFT AND RIGHT DART CONFLUENCE  POINTS, RESPECTIVELY, ARE COMPUTED AND USED TO CALCULATE THE CURRENT INFORT START THAN THE DART START INPUT DISTANCE, BUT LESS THAN THE DART STOP INPUT DISTANCE, THEN THE FORCES AND MOMENTS  FOR THAT DART LINE ARE CALCULATED.  CALLES STOP  STOP INPUT DISTANCE, THEN THE FORCES AND MOMENTS  FOR THAT DART LINE ARE CALCULATED.  CALLES STOP  NOTICE STATOC  CALLES  ON-COMMON VARIABLES DEFINED:  FYDIT) - COMPONENTS OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDIT) - COMPONENTS OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDIT) - COMPONENTS OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDIT) - COMPONENTS OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDIT) - COMPONENTS OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDIT) - RESPECTIVELY  A RESPECTIVELY  FYDITO - TOTAL FORCE OF THE LEFT AND RIGHT DART LINE MOMENTS INDART(1) - RESPECTIVELY  FYDITO -	SUBROUTINE DARTEM	X115
FUNCTION - COMMUNES THE FORCES AND MOMENTS OF THE DART LINES  NETHOD - VECTORS ROWN HE LEFT AND RIGHT DART CONFLUENCE POINTS, OT THE LEFT AND RIGHT DART CONFLUENCE POINTS, TO THE LEFT AND RIGHT DART CONFLUENCE POINTS, TO THE LEFT AND RIGHT DART LINES  IF THE LENGTH OF EITHER LINE IS GREATER THAN THE DART STOP INDUT DISTANCE, BUT LESS THAN THE DART LINES, RESPECTIVELY  ROTALS  CALLS  ROTAL  SEATOC  CALLS  FYD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY  FYD(1) - RESPECTIVELY  FYD(1) - RESPECTIVELY  TUDART(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES, FYD(1) -  FYD(1) - RESPECTIVELY  TUDART(1) - RESPECTIVELY  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  OVERTION OF THE LEFT AND RIGHT DART LINE MOMENTS  THOMRITIAL ERROR CONDITIONS  COMMON /FORCES OF FYDERSO  FYD(1) - RESPECTIVELY  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  FYD(1) - RESPECTIVELY  COMMON /FORCES O FYGESO  FYGUSO	•	
METHOD - VECTORS FROM THE LEFT AND RIGHT DART CONFLUENCE POINTS, IT OF THE LEFT AND RIGHT DART ATTACHMENT POINTS, RESPECTIVELY, ARE COMMUNIED AND USED TO CALCULAIF THE CURRENT LENGTH OF THE DART LINES  IF THE LENGTH OF ETHER LINE IS GREATER THAN THE DARK START HOW'T DISTANCE, BUT LESS THAN THE STOP INVOL DISTANCE. THEN THE FORCES AND MOMENTS  CALLED BY: RATIOLS  ROTHER SET THEN THE CALCULATED. CALLED BY: RATIOLS  ROTH THAT DART LINE ARE CALCULATED. CALLED BY: RESPECTIVELY FED(1) - LENGTH OF LEFT AND RIGHT DART LINES. FED(1) - LENGTH OF LEFT AND RIGHT DART LINES. FED(1) - LENGTH OF LEFT AND RIGHT DART LINES. FED(1) - RESPECTIVELY F	FUNCTION -	PUTES THE FORCES AND MOMENTS OF THE DART LINES
METHOD - VECIDES FROM THE LEFT AND RIGHT DART COMPLUENCE DOINTS, RESPECTIVELY, ARE COMPUTED DATD ATTACHMENT FOUNTS, RESPECTIVELY, ARE COMPUTED AND USED TO CALCULATE THE CURRENT INGTHE OF THE DART LINES. STOP INPUT DISTANCE, THEN THE FORCES AND MOMENTS CALLED BY: CALLED BY: THE LENGTH OF EITHER LINE IS GREATER THAN THE DART START INPUT DISTANCE, THEN THE FORCES AND MOMENTS CALLED BY: CALLED BY: TENTATE NON-COMMON VARIABLES DEFINED: CALLS: RESPECTIVELY FXD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES. RESPECTIVELY FXD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES. FXD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES. FXD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES. FXD(1) - RESPECTIVELY THDART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINES. FXD(1) - RESPECTIVELY THDART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINES. FXD(1) - RESPECTIVELY THOART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINES. FXD(1) - RESPECTIVELY THOART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINE NUMBERS TINDART(1) - COMPONENTS OF FYCASO(2) FYCASO(2) FYCASO(2) FYD(2) FYD(2) FYD(2		THE SEAT/OCCUPANT SYSTEM
POINTS, TO THE LEFT AND RIGHT DART ATTACHMENT POINTS, RESPECTIVELY, ARE COMPUTED AND USED TO CALCULATE THE CURRENT LENGTH OF THE DART LINES IF THE LENGTH OF THE DART LINES STOP INPUT DISTANCE, BUJ LESS THAN THE DART LINE SEATOCC CALLS:  CALLS:  CALLS:  CALLS:  REATOCC  CALLS:  FEXIL:  FEXI	•	TORS FROM THE LEFT AND RIGHT DART CONFLUENCE
POUNTS RESPECTIVELY, ARE COMPUTED AND USED TO CALCULATE THE CURRENT LENGTH OF THE DART LINE STEP THAN THE DART STOP INPUT DISTANCE, BUT LESS THAN THE DART STOP INPUT DISTANCE, BUT THE PRECES AND MOMENTS CALLED BY:  CALLED BY:  CALLED BY:  SATOCC CALLS  ROTHER LENGTH OF EFT AND RIGHT DART LINES, RESPECTIVELY FOLLI) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY FOLLI) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY FOLLI) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY FOLLI) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS INDURT(I) - RESPECTIVELY THE LEFT AND RIGHT DART LINE MOMENTS AND THE RUN I STERMINATED TOWN AND THE RUN I S	104	NTS, TO THE LEFT AND RIGHT DART ATTACHMENT
COMMON FORCES OF THE RENGTH OF ETHINE THE THE MAY THE DART START INNUT DISTANCE, BUT LESS THAN THE DART STOP INNUT DISTANCE, BUT LESS THAN THE DART STOP INNUT DISTANCE, BUT LESS THAN THE DART STOP INNUT DISTANCE, THEN THE FORCES AND MOMENTS FOR THAT DART LINE ARE CALCULATED.  CALLED BY:  CALLED BY:  CALLED BY:  RESPECTIVELY  FOULD:  LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FOULD:  LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDE(1) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FYDE(1) - LENGTH OF LEFT AND RIGHT DART LINE MOMENTS  TALDART(1) - COMPONENT OF THE LEFT AND RIGHT DART LINE MOMENTS  TALDART(1) - RESPECTIVELY  FYDE(1) - RESPECTIVELY  FYDE(1) - RESPECTIVELY  A MESSAGE IS PRIMITED AND THE RUN IS TERMINATED  A MESSAGE IS PRIMITED AND THE RUN IS TERMINATED  A MESSAGE IS PRIMITED AND THE RUN IS TERMINATED  TALDART(1) - RESPECTIVELY  FYSE(20(3) FYCLASO(2) FYCLASO(2) FYCLASO(2)  FYSE(20(4) FYCLASO(3) FYCLASO(3) FYCLASO(3)  FYSE(20(4) FYCLASO(3) FYCLASO(3) FYCLASO(3)  FYCLSO(6) FYCLASO(3) FYCLASO(6)  FYCLSO(6) FYCLASO(3) FYCLASO(3)  FYCLSO(6) FYCLASO(3) FYCLASO(6)  FYCLSO(6) FYCLASO(6) FYCLA	P01	NIS, RESPECTIVELY, ARE COMPUTED AND USED TO
COMMON / IOART STATE INPUT DISTANCE, BUT LESS THAN THE DARR STOP INPUT DISTANCE, BUT LESS THAN THE DARR STOP INPUT DISTANCE, THEN THE FORCES AND MOMENTS CALLEG BY:  SEATOCC CALLS: CALLS CALLS CALLS CALLS FYD(1) - LENGTH DOF LEFT AND RIGHT DART LINES, RESPECTIVELY FDC(1) - TALL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY FDC(1) - TALL FORCE OF THE LEFT AND RIGHT DART LINES, FYD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES, FYD(1) - RESPECTIVELY FDC(1) - RESPECTIVELY FYD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINE MOMENTS INDART(1) - RESPECTIVELY FYD(1) - COMPONENT FORCES OF THE LEFT AND RIGHT DART LINE MOMENTS INDART(1) - RESPECTIVELY FYD(1) - COMPONENT FORCES OF THE LEFT AND RIGHT DART LINE MOMENTS INDART(1) - RESPECTIVELY FYD(1) - COMPONENT FORCES COMMON BLOCK COMMON / FORCES COMMON BLOCK COMMON / FORCES COMMON BLOCK FYSISOS FYORTSO FYDESO FYDESO FYDESO FYSISOS FYDESO FY	CAL	COLATE THE CURRENT LENGTH OF THE DART LINES
STORY STORY STANDER THEN THE FORCES AND MOMENTS  CALLED BY:  SEATOCC  CALLS  SEATOCC  CALLS  RETACL  CALLS  RETACL  CALLS  RESPECTIVELY  LOL(1) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FXD(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES,  RESPECTIVELY  TLDART(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINE MOMENTS  TMDART(1) - RESPECTIVELY  TLDART(1) - RESPECTIVELY  TMDART(1) - RESPECTIVEL	4 6	INE LENGIN OF EITHER LINE IS GREATER THAN THE DADT
COMMUNICATIONS:  CALLED BY: CALLED BY: SEATOC  CALLS: ROTAF NON-COMMON VARIABLES DEFINED: LOL(1) - LENGTH OF LEFT AND RIGHT DART LINES. RESPECTIVELY FDC(1) - LENGTH OF LEFT AND RIGHT DART LINES. RESPECTIVELY FXD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES. FXD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES. FXD(1) - RESPECTIVELY FYD(1) - COMPONENT S OF THE LEFT AND RIGHT DART LINE MOMENTS THDART(1) - RESPECTIVELY FYD(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINE MOMENTS TOCKUPANT FORCES OF THE LEFT AND RIGHT DART LINE MOMENTS TOCKUPANT FORCES COMMON BLOCK COMMON / FORCES COMMON BLOCK COMMON / FORCES O / FXCASO(2) FYCASO(2) FZCASO(2) FXRKSO(6) FYSKSO(6) FZKSO(6) FXRKSO(6) FYSKSO(6) FYSKSO(6) FXRKSO(6) FYSKSO(6) FZKSO(6) FXRKSO(6) FYSKSO(6) FYSKSO(6) FYSKSO(6) FYSKSO(6) FYSKSO(6) FXRKSO(6) FYSKSO(6)	015	P INDIT DISTANCE THEN THE FORCES AND MOMENTS
COMMUNICATIONS: CALLS: SEATOCC CALLS: SEATOCC CALLS: SATOCC CALLS: CALLS: CALLS: SATOCC CALLS: CALLS: FOOT		THAT DART LINE ARE CALCULATED.
CALLED BY:  CALLS:  NON-COMMON VARIABLES DEFINED:  LOL(1) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FDC(1) - LENGTH OF LEFT AND RIGHT DART LINES,  RESPECTIVELY  FXD(1) - RESPECTIVELY  TIDART(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES,  FXD(1) - RESPECTIVELY  TIDART(1) - RESPECTIVELY  TOWNORMIS OF THE LEFT AND RIGHT DART LINE MOMENTS  TOWNORMS  TOWNO	C COMMUNICATIONS:	
SEATOCC CALLS: ROTATE NON-COMMON VARIABLES DEFINED: LDL(1) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY FDC(1) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, RESPECTIVELY FYD(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TOMBONITIONS OLVISION BY ZERO WHEN LRDL OR LLDL FOURL ZERO A MESSAGE IS PRINIFD AND THE RUN IS TERMINATED  A MESSAGE IS PRINIFD AND THE RUN IS TERMINATED  COMMON / FORCES COMMON BLOCK COMMON / FORCES OF FYCASO(2) FZCASO(2) FXXLSO(6) FYSLSO(6) FZCASO(6) FXXLSO(6) FYSLSO(6) FZCASO(6) FXXLSO(6) FYSLSO(6) FZARSO(6) FXXLSO(6) FYSLSO(6) FZARSO(6) FXXLSO(7) FYSLSO(6) FZARSO(6) FXXLSO(7) FYSLSO(7) FYSLSO(7) FXXLSO FYSLSO(7) FYSLSO(7) FXXLSO FXXLSO FYSLSO(7) FZARSO(7) FXXLSO FXXLSO FYSLSO(7) FZARSO(7) FXXLSO FXXLSO FYSLSO(7) FYSLSO(7) FXXLSO FXXLSO FYSLSO(7) FXARSO FXXLSO(7) FXXLSO FXXLSO FYSLSO(7) FXARSO FXXLSO(7) FXXLSO FXXLSO FYXLSO(7) FXARSO FXXLSO(7) FXXLSO FXXLSO FXXLSO FXXLSO(7) FXXLSO FXXLSO FXXLSO FXXLSO(7) FXXLSO FXXLSO FXXLSO FXXLSO(7) FXXLSO FXXLSO FXXLSO FXXLSO FXXLSO(7) FXXLSO FXXLSO FXXLSO FXXLSO(7) FXXLSO F		
CALLS:  ROTATE  NON-COMMON VARIABLES DEFINED:  LDL(I) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY  FDC(I) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES.  FXD(I) - RESPECTIVELY  TLDART(I) - RESPECTIVELY  TNDART(I) - RE		
NON-COMMON VARIABLES DEFINED:  LOL(I) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY FDC(I) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES, FYD(I) - COMPONENT FORCES OF LEFT AND RIGHT DART LINE MOMENTS THDART(I) - RESPECTIVELY THDART(I) - RESPECTIVELY THOART(I) - RESPECTIVELY TOTAL FROM COMDITIONS OLVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  FXIUSSO	CALLS	
NON-COMMON VARBLES DEFINED:  LOU(I) - LENGTH OF LEFT AND RIGHT DART LINES. RESPECTIVELY FDC(I) - LENGTH OF LEFT AND RIGHT DART LINES.  FXD(I) - RESPECTIVELY FXD(I) - RESPECTIVELY FXD(I) - RESPECTIVELY FYD(I) - COMPONENT FORCES OF LEFT AND RIGHT DART LINE MOMENTS THDART(I) - RESPECTIVELY THORAT(I) - RESPECTIVELY POTENTIAL FROM COMDITIONS A MESSAGE IS PRINTED AND THE RUN IS TERMINATED A MESSAGE IS PRINTED AND THE RUN IS TERMINATED FXTUBSO FYCKSO(6) FYCKSO(6) FZCKSO(2) FXTUBSO FYCKSO(6) FYCKSO(6) FZCKSO(6) FXTUBSO FYCKSO(6) FYCKSO(6) FXTUBSO FYCKSO(6) FXTUBSO FYCKSO(6) FXTUBSO FYCKSO(6) FYCKSO FYCKSO(6) FYCKSO FYCKSO FYCKSO(6) FYCKSO FY		W .
LOL(I) - LENGTH OF LEFT AND RIGHT DART LINES, RESPECTIVELY RESPECTIVELY RESPECTIVELY RESPECTIVELY TLDART(I) - RESPECTIVELY TLDART(I) - RESPECTIVELY TLDART(I) - RESPECTIVELY TNDART(I) - REPRESENTED TOWNON / FORTSOCO - FYSISON TOWNON / TORRITO - TORRETON -	NON-COMMON VAI	DEF INED:
FDC(I) - TOTAL FORCE OF THE LEFT AND RIGHT DART LINES,  FYD(I) - RESPECTIVELY  TLDART(I) - RESPECTIVELY  TLDART(I) - RESPECTIVELY  TLDART(I) - RESPECTIVELY  TNDART(I) - RESPECTIVELY  POTENTIAL ERROR CONDITIONS  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  COMMON /FORCES COMMON BLOCK  COMMON /FORCES COMMON BLOCK  FX10BSO FYLOSO(2) FZCASO(2)  FX10BSO FX10BSO FYLOSO(3) FZCASO(3)  FX10BSO FYCASO(3) FYCASO(3)  FYCASO(3) FYCASO(3	- (1)	Š
FXD(1) - FYD(1) - FYD(1) - FYD(1) - FYD(1) - RESPECTIVELY  TLDART(1) - TNDART(1) - TNDART(	FDC(1) -	ΞE
FYD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES, FZD(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  COMMON / FORCES O / FXCASO(2) FZCASO(2) FXTUBSO FYCASO(3) FZCASO(3) FXTUBSO FYCASO(6) FZCASO(6) FXTUBSO FYCASO(6) FZCASO(6) FXAESO FYCASO(6) FZCASO(6) FYCASO FYCASO(6) FYCASO(6) FYCASO FY		PECTIVELY
FYD(1) - COMPONENT FORCES OF LEFT AND RIGHT DART LINES, FZD(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY TWDART(1) - RESPECTIVELY A MESSAGE 1S PRINTED AND THE RUN IS TERMINATED A MESSAGE 1S PRINTED AND THE RUN IS TERMINATED A MESSAGE 1S PRINTED AND THE RUN IS TERMINATED FXTUBSO FYCASO(2) FZCASO(2) FZCASO(2) FXTUBSO FYTUBSO FYTUBSO FYCASO(6) FZCASO(6) FZCASO(6) FXCASO(6) FYCASO(6)		
TLDART(1) - RESPECTIVELY TLDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY TMDART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINE MOMENTS TMDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY TMDART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINE MOMENTS TMDART(1) - RESPECTIVELY TMDART(1) - RESPECTIVELY  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  COMMON / FORCES COMMON BLOCK  COMMON / FORCES COMMON BLOCK  COMMON / TOARTON FORCES COMMON BLOCK  COMMON / TOARTON / T		BONENT EDBORG OF LEET AND DIGHT DADT 1 INES
TIDART(1) TIDART(1) TIDART(1) TIMART(1) TIME MOMENTS TOWNON / TORCES COMMUN BLOCK  COMMON / TORCES COMMUN BLOCK TXSLSG(6) TXSL	,	RESPECTIVELY
TLDART(1) TMOART(1) TESPECTIVELY TARSOCCUPANT FORCES TATUBSO		
TMDART(1) - COMPONENTS OF THE LEFT AND RIGHT DART LINE MOMENTS TMDART(1) - RESPECTIVELY  POTENTIAL ERROR CONDITIONS  DIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO  DIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO  A MESSAGE IS PRINIED AND THE RUN IS TERMINATED  A MESSAGE IS PRINIED AND THE RUN IS TERMINATED  COMMON / FORCES COMMON BLOCK  FXCASO(2) FYCASO(2) FZCASO(2)  FXCASO(2) FYCASO(2) FZCASO(2)  FXCASO(3) FYCASO(6) FZCASO(6)  FXCASO(6) FYCASO(6) FZCASO(6)  FXCASO(7) FYCASO(6) FZCASO(7)  FXCASO(1) FYCASO(6) FZCASO(1)  FXCASO(1) FYCASO(6) FZCASO(1)  FXCASO(1) FYCASO(1) FZCASO(1)  FXCASO(1) FYCASO(1) FZCASO(1)  FXCASO(1) FYCASO(1) FZCASO(1)  FXCASO(1) FYCASO(1) FZCASO(1)  FXCASO(1) FYCASO(2) FZCASO(2)  FXCASO(2) FYCASO(2) FZCASO(2)  FXCASO(2) FYCASO(2) FZCASO(2)  FXCASO(2) FZCASO(	TLDART(1)	
POTENTIAL ERROR CONDITIONS DIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO DIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO DIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO DIVISION BLOCK COMMON / FORCES COMMON BLOCK FYLUBSO FYCHSO(6) FZLSO(6) FYRKSO(6)	• 1	PONENTS OF THE LEFT AND RIGHT DART LINE MOMENTS.
POTENTIAL ERROR CONDITIONS  OIVISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO  A MESSAGE IS PRINIED AND THE RUN IS TERMINATED  A MESSAGE IS PRINIED AND THE RUN IS TERMINATED  COMMON FORCES COMMON BLOCK  COMMON FORCES COMMON BLOCK  FYCASO(2) FYCASO(2) FZCASO(2)  FXTUBSO FYLUBSO FZUBSO  FXTUBSO FYCESO(6) FZCASO(6)  FXRKSO(6) FYSLSO(6) FZCASO(6)  FXRKSO(6) FYCHSO(6) FZCHSO(6)  FXRKSO(6) FYCHSO(6) FZCHSO(6)  FXCHSO(7) FYCHSO(6) FZCHSO(6)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1) FZCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1) FYCHSO(1)  FXCHSO(1) FYCHSO(1)	INCARICED:	RESPECTIVELY
A MESSAGE   S PRINIED AND THE RUN IS TERMINATED		SNOILIONS
A MESSAGE IS PRINTED AND THE RUN IS TERMINATED  SEAT/DCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) , FZCASO(2) ,  FX10BSO , FYTUBSO , FYTUBSO , FZTUBSO ,  FX10BSO , FYTUBSO , FZTUBSO ,  FXRKSO(6) , FYKSO(6) , FZESO ,  FXAESO , FYESO , FZESO ,  FXAESO , FYESO , FZESO ,  FXAESO , FYESO , FZENSO(3) ,  FXAESO , FYESO , FZENSO(3) ,  FXAESO , FYESO , FZENSO(3) ,  FXAESO , FYESO , FZENSO ,  FXAESO , FYESO , FZENSO ,  FXAESO , FYESO ,  FXAESO ,  FYESO ,		ISION BY ZERO WHEN LRDL OR LLDL EQUAL ZERO -
SEAT/DCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2)	N V	ESSAGE IS PRINTED AND THE RUN IS TERMINATED
SEAT/DCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) , FYCASO(2) , FYUBSO FYUBSO FYTUBSO FYTUBSO FYTUBSO FYTUBSO FXCASO(6) , FYSLSO(6) , FYSLSO(6) , FYSLSO(6) , FZSLSO(6) , FXCHSO(3) , FYCHSO(3) , FZCHSO(6) , FXCHSO(3) , FYCHSO(3) , FZCHSO(6) , FXCHSO(3) , FYCHSO(3) , FZCHSO(3) , FXCHSO FYCHSO FYCHSO FZCHSO FZCHSO FYCHSO FYCHS	• • • • • • • • • • • • • • • • • • • •	
COMMON / FORCESO / FXCASO(2)	SEAT/DCCUPANT FOR	CES COMMON BLOCK
COMMON / FORCESO / FXCASO(2) , FYCASO(2) , FZCASO(2) , FZCASO(2) , FYUBSO , FYUBSO , FYUBSO , FYUBSO , FYUBSO , FYUBSO , FXLUSO , FZLSO(6) , FXESSO , FYESSO , FZCHSO(6) , FZCHSO(6) , FXESO , FYESO , FZCHSO(3) , FZCHSO(3) , FXESO , FYESO , FZCHSO , FZCHSO , FXESO , FYESO , FZCHSO , FZCHSO , FZCHSO , FXCHSO , FZCHSO , FZCHSO , FXCHSO , FZCHSO , FXCHSO , FZCHSO , FZCHSO , FZCHSO , FXCHSO , FZCHSO , FXCHSO , FZCHSO , FXCHSO ,	**************	*******
FXUBSO	COMMON /FORCE	. FYCASO(2) .
FASLSU(6) FYSLSU(6) FZSLSU(6) FZRSIG(6) FZRRSU(6) FZRRSU(6) FZRRSU(6) FZRRSU(6) FZRRSU(6) FZRRSU(6) FZRESU FXAESO FYAESO FZAESO FZAESO FYDESO FZAESO	•	. FYTUBSO .
FXMESO FYGESO FZEESO FZEESO FZEESO FXEESO FYGESO FYGESO FYGESO FXEESO FYGESO FZEESO FXEESO FXCESO FYGESO FZEESO FXCESO FXCESO FXCESO FZEESO FXCETSO FXCETSO FZEESO FXCETSO FXC	• .	. FYSLSO(6) ,
FYDESO FYDESO FACESO FACESO FYDESO FYDESO FYDESO FACESO FACESO FYDESO FACESO FA	, 4	. LAKASO(6)
FYORTSO FYORTSO FEDRESO FEDRESO FEDRESO SECTION 11 COMMON BLOCK COMMON / IDARTIN / IDART DRIFFEE DRISTRY DRISTOP XORTAP(2), YORTAP(2), ZORTAP(2), XORTAP(2), YORTAP(2), ZORTAP(2), XORTCP(2), YORTCP(2), ZORTCP(2), XORTCP(2), YORTCP(2), ZORTCP(2), COMMON BLOCK COMMON WATRIX / DCMAE(3,3) DCMRA(3,3) DCMSA(3,3) DCMSE(3,3) DCMSE(3,3)	• •	CONTRACTOR OF THE CONTRACTOR O
SECTION 11 COMMON BLOCK  COMMON / LDARTIN / LDART  XORIAP(2), YORIAP(2), ZORTAP(2),  XORICP(2), YORICP(2), ZORTCP(2),  MATRIX COMMON BLOCK  COMMON /MATRIX / DCMAE(3,3), DCMRA(3,3),  COMMON /MATRIX / DCMSE(3,3), DCMTS(3,3),  COMMON /MATRIX / DCMSE(3,3), DCMTS(3,3), DCMTS(3,3),  COMMON /MATRIX / DCMSE(3,3), DCMTS(3,3), DCMTS		FYORTSO
COMMON /IDARIIN / IDARI . GRIFRCE , DRISTRI , DRISTOP XDRIAD(2), ZDRIAD(2), ZDRIAD(2), XORICP(2), XORICP(2), ZDRICP(2), ZDRICP(2), XORICP(2), XORICP(2), ZDRICP(2), Z		***************************************
DRISTRI , DRI ZDRICP(2). ZDRICP(2)	NOW BOOK OF THE PROPERTY OF TH	01.0VN 
ZDRTAP(2), ZDRTCP(2) . DCMSA(3.3) . DCMTE(3.3)	COMMON / IDART	IN / IDART . DRIFRCE , DRISTRY , DRISTOP ,
ZDRTCP(2)  DCMSA(3.3)  DCMTE(3.3)	•	XDRIAP(2), YDRIAP(2).
) DCMSA(3,3)	•	XORICP(2), YORICP(2), ZORICP(2)
) DCMSA(3,3)	C MATRIX COMMON BLD	
DCMSE (3, 3) DCMTS(3, 3)	TOWN AMATER	) DCMSA(3-3)
In the second	* K. M.	DOMSE(3,3) DOMSE(3,3)
10 014000000		. DCM13(3.3) .

C COMMON /MISC / IPAGECT(31) LINECT(31)   IPRICATION    ** IEADLE   IEADLE   IEADLE    **	C WISCELL		DCMDUM(3, 3)	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	:
PRECNICATION   MAXREPT   INVECTICATION   PRECNICATION	WO .	ANEUUS DAIA CUM	MMON BLOCK	:	• • • • • • • • • • • • • • • • • • • •	• :
FERTINE   HEADEL   HEADEL	•	AMON /MISC /	IPAGECT(31)	, LINECT(31)	, IPRICNI(31)	•
INTEGER	•		MAXL INE	MAXREPT	. MAXEVNT	•
HEADER   HEADER   HEADER	•		IEVLINE 10416	LEKKILG LEKKILG		
### ### ### ### ### ### ### ### ### ##	• •		HEADSR	HEADYAW	HEADPIT	
HEADER(24)   IEVENTS(38)   TRIMS(38)	•		HEADROL	HEADWGT	BIAS	
HEADER(24)   IEVENTS(38)   THES(38)	+		REPTYPE (5.3		, PRTWGHT(2)	
HANDC	•		IHEADER(24)	-	•	•
PRINDX   PRIVATE	•			IMVDC		
## ZVECT(3)	•		PRIMASS(2)	PRI INDX	. PKZVEL	
**************************************	•		ZVECT(3)	, XY2(3)	. SAVTIME	
INTEGER	•		XACCEL(3)	, YACCEL (3)	. ZACCEL (3)	
### PRIEMP ####################################	INI	FGER	REPTYPE	, BIAS	, PRTLNGI	•
### ### ##############################	• •		PRIEMP	PRIMASS	. PRTINDX	
	C MOMARMS	•	• • • • • • • • • • • • • • • • • • • •		•	: •
### COMMON /MDMARMS / REFLUSA .URX(6) .URY(6) .URZ(6) .  ### ** ** ** ** ** ** ** ** ** ** ** **	C			************	*************	:::
+X5SOCA(2), YSSOCA(2), XSSORK(6), YSSORK(6), YSSORK(6), YSSOCA(2), XSSORRE	MOD	æ				
+XSSORRE YSSORRE ZSSORRE YSSORRE SSOURE YSSORRE SSOURE SSOURE SSOURE SSOURE YSSORRE YSSORRE ZSSORRE SSOURE YSSORRE YSSORRE ZSSORRE SSOUR YSSORD ZSSOR YRCSAC ZRRCSAC ZSRCSAC YSSOSR YSSOCH(3), YSS	4 d X +	LNSO , KEFLNOA	, MEFLINSA .	יטאא(פ) אטניטא. מטאא (פ)אטניטא	) .UR2(6) .	
## 1750MRE   175	88X+	SUCA(2), TSSUCA(2)	2), 255UCA(2),	, ASSUMPTO), TSSUM	A(0), 2350KA(0),	
+X5SGSB(6), Y5SGSB(6), X5RCSBC (YBRCSBC (YBRCSBC (YSSGSBC (YSSGSBC) (YSSGSBC (YSSGSBC (YSSGSBC (YSSGSBC) (YSSGSBC) (YSSGSBC) (YSSGSBC (YSSGSBC) (YS	22X+					
+XSSCSAC (7SSCSAC (7SSOSRP (7S	0024	COMPAL : 1330MAL	( 9780007 ( :			
**************************************	00X+	0030(0), 133030(0)	755C5AC			
+ XSSASRP , YSSASRP , XRRDAP(2), YRRDAP(2), ZRRDAP(2), XRRSBO(6), ZRRSBO(6), XSSOCP(2), YSSOCP(2), ZSSOCP(2), XSSOAP(2), ZSSOAP(2), XSSOAP(2),	*					
+ KRSBO(6), YRRSBO(6), XSSOCP(2), YSSOCP(2), ZSSOCP(2), XSSOAP(2), ZSSOAP(2), XESOAC (YESOAC (	55 X +		ZSSASRP	XRRDAP(2), YRRDA	P(2) ZRRDAP(2).	
+XSSDAP(2), YSSDAP(2), ZSSDAC	+ × R R	280(6), YRRSBO(6	3), ZRRSBO(6).	xSSOCP(2), YSSOC	P(2), ZSSOCP(2),	
+XSRCSAC YSRCSAC XSSOAC YSSOAC ZSSOAC ZSSOAC +XSSOSB YRSOSB XRRSBUT YRRSBUT ZRRSBUT YRRSBUT ZRRSBUT YRRSBUT ZRRSBUT ZRRSBUT ZRRSBUT ZRRSBUT ZASOCH(3). ZASOCH ZASOCC ZASOCC ZASOAC ZRSCOAC ZRS	55×+	SDAP(2) YSSDAP(2	) 75SDAP(2)	XFSOAC YESOA	C ZESOAC	
+XRSOSB ,YRSOSB ,ZRSOSB ,XSSOCH(3),YSSOCH(3), YSSOCH(3), YSCOAC ,ZRSOAC ,Z	asx.	CSAC YSRCSAC	ZSRCSAC			
+ XRRSB	SAX+	,		_		
+XAACSO ; ZAACSO ; XASOAC ; YASOAC ; ZASOAC ; XASOAC ; ZASOAC ; XSCDAP(2); YSCPAP(2); ZSCPAP(2) ; XSCPAP(2); ZSCPAP(2); ZSCPA	+ XRR			XSS0CH(3) YSS0C	H(3), ZSSOCH(3).	
+XRSOAC ; ZRSOAC ; ZRSOAC ; ZSCPAP(2); ZSCPAP(2) ; ZSC	+XAA			XASOAC	C ZASOAC .	
INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTA / TIME , TIMES   DELTAT   TRAJOA(193)   TRAJOA(1	+XRS			5	P(2), ZSCPAP(2)	
INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTTA / TIME		*************	•••••••			•
COMMON / RKUTTA / TIME TIMES DELTAT TRAJOR(193) . TRAJOR . TRA		ATTON ROUTINE CO	DMMON BLOCK			•
TIME   TIMES   DELTAT   TRAUSA(193)   TRAU		***********	**********		•	• • • • • • • • • • • • • • • • • • • •
TRAUDA(193) .   TRAUDA(193) .   TVCEQS(225) .   TVCEQS(225) .   TVCPASS   TVCASS	WOO COM	HON /RKUITA /		-	. TRAUSO(193)	
) TVCEOS(225)	+		TRAUSA( 193)	, TRAJOA(193)	, TRAJCH(97,3)	
QUATDA(65)   PCPASS	•		TRAJAC( 193)	, TVCEQS(225)	, OUATSO(65)	
S 17X   17X	+		QUATSA(65)	, QUATOA(65)	. QUATAC(65)	
15 17X 1KSUMX 18 1 1111X 18 1 1711X 18 1 1711X 18 1 1711X 18 1 1711X 18	•		INTSTP	, IPCPASS	. IRKPASS .	
. IKSUMX . I	+		IPOINTS	. I^x	. IYPRX	
. IVIAX IVPRIX I PYIX I CYFIX	•		IKX	, IKSUMX	. IKPASSX	
2x . IPPIX I 2x . IPVIX I . ICYL1X I	•		1 Y I X	. IVI 1X	. IY12x	
2X . IPYIX	•		XEIVI	. IYPRIX	. IYPRI1X	
. 1CY11X . I	•		IYPR12X	. IPYIX	. IPYIIX	
	•		1CY1X	. ICYLIX	. IREIN	

115	+ + + +	TLSLSU(6) . TLRKSO(6) . TLCHSO(3) . TLAESO		TNSL 30(6) . TNRK S0(6) . TNCHS0(3) . TNCHS0		
120		TLDRISO .	- MDR150	NDK 150		
125	C TRANSFORM VECTOR IN RCS FROM DRIGIN OF RCS TO A/C C.G., TO SCS	N RCS FROM DRIG	IN OF RCS TO	ANSFORM VECTOR IN RCS FROM DRIGIN OF RCS TO A/C C.G., TO SCS	• • •	
130	C CALL ROTATE(XRRCSAC, XSRCSAC, 2VECT(1), DCMSR, 0) C C CALL ROTATE(XRRCSAC, XSRCSAC, 2VECT(1), DCMSR, 0) C TRANSFORM VECTOR IN EFCS FROM S/O C.G. TO A/C C.G., TO SCS	CALL ROTATE(XRRCSAC, XSRCSAC, 2VECT(1), DCMSR, O) SFORM VECTOR IN EFCS FROM S/O C.G. TO A/C C.G	VECT(1), DCMS	R,O)	• • •	
135		CALL ROTATE(XESDAC, XSSOAC, ZVECT(1), DCMSE, O)	CT(1), DCMSE.	•		
140	C TRANSFORM VECTOR IN RCS FROM DRIGIN OF RCS TO RIGHT AND LEFT C DART ATTACH POINTS, TO SCS	N RCS FROM DRIG	IN OF RCS TO	RIGHT AND LEFT		
145	C		0.0 0.0 0.0 0.0			
150	C XYZ(1) = XRBDAP(1) XYZ(2) = YRBDAP(1) XYZ(3) = ZRBDAP(1)	(1)d (1)d (1)d		í		
155	CALL ROTATE(XY C XSSDAP(1) = XY YSSDAP(1) = XY ZSSDAP(1) = XY	CALL ROIATE(XYZ(1),XYZ(1),ZVFGT(1),DCMSR.O) XSSDAP(1) = XYZ(1) YSSDAP(1) = XYZ(2) ZSSDAP(1) = XYZ(3)	CT(1), DCMSR.	ō		
160		M RIGHT AND LEF	T CONFLUENCE ESPECTIVELY	COMPUTE VECTOR FROM RIGHT AND LEFT CONFLUENCE POINTS, TO RIGHT AND LEFT ATTACHMENT POINTS, RESPECTIVELY	• • • • • • • • • • • • • • • • • • • •	
S	C XSCPAP(1) = XSSUAC YSCPAP(1) = YSSUAC ZSCPAP(1) = ZSSOAC	XSSOAC XSSOCP(1) YSSOAC - YSSOCP(1) ZSSOAC - ZSSOCP(1)	) · XSRCSAC ) · YSRCSAC ) · ZSRCSAC	+ XSSDAP(1) + YSSDAP(1) + ZSSDAP(1)		
170	C COMPUTE LENGTH OF DART LINES C. COMPUTE LENGTH OF COMPUTE CO	DART LINES			• • • • • • • • • • • • • • • • • • • •	

```
C CALCULATE DART LINE FORCES AND MOMENTS

C CALCULATE DART LINE FORCES CONTINUED TO THE CON
LDL = SQRI(XSCPAP(I) + XSCPAP(I) + YSCPAP(I) + YSCPAP(I) + ZSCPAP(I) + ZSCPAP(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IF(INTSTP .EQ. 0) GDTO 50
IF(LDL .LE. DRTSTDP) GDTO 50
IEVENTS(34+1) = 1
ITMES(34+1) = TIME
IF(IEVENTS(35) .EQ. IEVENTS(36)) IDART=
GDTO 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6010 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90
```

TLORISO= TLORISO + (YSSOCP(I) • F2D - ZSSOCP(I) • FYD)
TMORISO= TMORISO + (ZSSOCP(I) • FXD - XSSOCP(I) • F2D)
TNORISO= TNORISO + (XSSOCP(I) • FYD - YSSOCP(I) \* FXD) FXDRTSO= FXDRTSO + FXD FYDRTSO= FYDRTSO + FYD F2DRTSO= F2DRTSO + F2D G010 500 100 CONTINUE ပ ပ ပ 210 205

TERRFIG = 1 CONTINUE RETURN END **2**0 ပ

ں

215

200 WRITE(5,250)
250 FORMAT(1x.//72(1H+)/,4x,"FATAL ERROR(SUBROUTINE DARTFM)\*\*\* ", + /,"RIGHT OR LEFT DART LINE CALCULATED TO BE EQUAL TO ZERO",/, + "RESULTS IN DIVISION BY ZERO",/,72(1H+))

8

Ç

FDL = DRIFRCE + .5/LDL FXD = FDL + XSCPAP(1) FYD = FDL + YSCPAP(1) FZD = FDL + ZSCPAP(1)

50 CONTINUE

6.3

DESCRIPTION - FUNCTION METHOD - COMMUNICATIONS CALLED BY CALLES NON COMMON VAR ACCELI - ACINTRP - I POTENTIAL ERRO	HE OYNAMIC RECURRENT TIME EV) FOR TIME. EAT ACCELERAF ROUTINE INTEG	SPONSE INDEX		
C COMMUNICATION COMPUTES TO FREVIOUS SEC COMMUNICATIONS C CALLED BY: C COMMUNICATIONS C CALLES GESS C C CALLS CALLES C CALLS C C C C C C C C C C C C C C C C C C	THE DYNAMIC RESCURRENT TIME ( SEV) FOR TIME, SEAT ACCELERATI ROUTINE INTEGRATION STEP SIZ	FONSE INDEX		•
C METHOD OSING THE C METHOD VALUE (TPR C BACK, THE C BACK, THE C COMMUNICATIONS C CALLED BY C CALLES C CALLS C	CURRENT TIME ( REV) FOR TIME, SEAT ACCELERATI ROUTINE INTEGRA	TIME AND LAST		•
C COMMUNICATIONS S C COMMUNICATIONS C C CALLED BY: C CALL	SEAT ACCELERATION STEP SIZE		PREVIOUS	•
C COMMUNICATIONS C COMMUNICATIONS C CALLED BY: C CALLES C CALLS: C CALLS: C CALLS: C ACTENTED BY: C ACTINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO	SEAT ACCELERATION STEP SIZE	AND T A CLODEN	AND LACT	•
C COMMUNICATIONS C COMMUNICATIONS C CALLED BY: C CALLED BY: C CALLES GESS C CALLS: C CALLS: C CALLS: C ACTION VARIABLES DEF C ACTION PROPERTORY C ACTION COMMON VARIABLES OFF C ACTION PROPERTORY C ACTION COMMON VARIABLES OFF C ACTION PROPERTORY C ACTION PROPERTORY C ACTION COMMON VARIABLES OFF C ACTION PROPERTORY C ACTION PRO	SATION SIEP SIZ	ON PADALES TO	THE SEAT	•
C COMMUNICATIONS C COLLED BY: C CALLED BY: C CALLS: C CONTONIAL ERROR CONDITIO	REDIENT STEP SIZ	ATES COOM TOOK	10 1146	
C COMMUNICATIONS C CALLED BY: C CALLS:		TE BEING DELIAT		
C CALLED BY: C GALLED BY: C CALLS: C CALLS: C CALLS: C NON COMMON VARIABLES DEF C ACCELI - SEAT/OCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO		12 20 20 20 20 20 20 20 20 20 20 20 20 20		
C CALLED BY:  GESS C CALLS: C CALLS: C NON COMMON VARIABLES DEF C ACCELL - SEAT/OCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO				•
C CALES C CALES C NON COMMON VARIABLES DEF C ACCELL - SEAT/OCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO				•
C CALLS: C CAND COMMON VARIABLES DEF C ACCELL - SEABLES OUF C ACCITTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO				•
C NON COMMON VARIABLES DEF C ACCELI - SEAT/OCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO				•
C NON COMMON VARIABLES DEF C ACCELL - SEAT/OCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO	RUNGE			•
C ACTILI - SEATOCCUP C ACINTRP - INTERPOLATE C POTENTIAL ERROR CONDITIO	: INFO			•
C ACINITP - INTRPOLATE C POTENTIAL ERROR CONDITIO	A PART OF OCCUPANT	TATOMIC A POST	1101	
C POTENTIAL ERROR CONDITION	ANI OR OCCOLAN	A ACOME & ACCE.	101	•
C. Pringnilati ERRON CONDITIO	ED VALUE FOR Z-	ACCELERATION		• '
	MONE - MONE			
				•
S				
•••••••••••••••••••••••••••••••••••••••	************	*************	•••••••	:
C DYNAMIC RESPONSE INDEX VARIABLES COMMON BLOCK	/ARIABLES COMMO	IN BLOCK		•
				•
				•
COMMON / DRIVEB / DRIVAL (2)	•		•	
+ DRI	NI DRIMAX	IAX IMAX	-	
	ZACCMAX DRICON	NO		
C SECTION 1 COMMON BLOCK				•
weekseenseesseesseesseesseesseesseesseess	************	************	************	
	STADI TSTOP	FSTOP 10F	TOFSTON TUNITS	
	SCHIIR, ISUSER			
	IPHASE1, IPHASEZ, IPHASE3	. IPHASES		
	ES10P			
	:::	*******	************	
C MISCELLANEOUS DATA COMMON BLOCK			•	
••••••		*************	**************	
dl / SIM/ NOMMOD	/ 1PAGECT(31)	1 INFC1(31)	IPRICNI(31)	
	MA ST. LANS	MAYOR DE	MAY CVN1	-
TE -		T T T T T T T T T T T T T T T T T T T	DIS SECTE	
-		I E KKI I G		
-	•	HE ADAL T	HE ADVE	
+	HEADSR ,	HE ADVAW	HE ADP I T	
±	HEADRO	HEADWGT	BIAS	
***	DEPLYPERS 311	PR11 NG1 (9)	PD TWGHT (2)	
	100000000000000000000000000000000000000	000000000000000000000000000000000000000	( 00 / 0 / 11	
	TE ALLE M ( 24 )	11 VLW   5 ( 36 )		
•		IMAGE.	PRIEMP( 2)	
•	PRIMASS(2)	PRIINDX	PKZVf1	
^2	ZVECT(3)	XYZ(3)	SAVIIME	
**************************************	XACCEL (31	VACCEL (3)	ZACCEL (3)	
	or or tube		0011100	
			באוראפו	
<u>.</u>				
<b>a</b>			X CIN I LX d	
	:	• • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • •	:
C INTEGRATION ROUTINE COMMON BLOCK	AON BLOCK			• ;
COMMON / RKUITA / TIE	TIME TIMES D	DELTAT	TRAUSO(193)	
	54(193)	. (193)	RAJICH(97.3)	
: 5		. (561) #00#41	MACCHES 1.37 .	

	148 36 ASSIFI	[ ]	ERIO EI	CAPE SI G. (UI AL. AF		SSI COMI TER PA F/G 9,	2/4 NL		\ 



MICROCOPY RESOLUTION TEST CHART

PAGE

SUBROUTIN	SUBROUTINE DRICALC 74/74 OF	OPT=1		FIN 4.6+428	83/11/07. 09.41.53
<b>ဝ</b>	* * * * * * * * * * * * * * * * * * *	QUATSA(65) INTSTP IPDINTS IKX IVIX IVIX IVIX IVIX IVIX ICVIX	QUATOA(68) IPCPASS IPCASS IKSUMX IVIIX IYPRIX IPPRIX ICVIIX	QUATAC(65) IRKPASS IRPRSX IKPASSX IVIZX IYIZX IPPIIX	
0,	IF(IDRIFLG .E IF(INTSTP .EC IF(TIME .LE. STOP DRI CALCULA!	. EQ. O) GDTO 999 . EQ. O) GDTO 999 . E. O.O) GD TO 900 . E. O.O) GD TO 100 . E. O.O)	TES FROM RAIL	· · · · · · · · · · · · · · · · · · ·	* * * * * * * * * * * * * * * * * * * *
75	CALL REPTORI IDRIFLG» O GDTO 999 10 CONTINUE DT = TIME - TPREV DD 30 1P=1 4				
08	C C	RATION BETWEEN T	PREV AND TIME SUBROUTINE RU	**************************************	•
85	C ACCEL = ZACCEL(1) - (ZACCEL(1) - ACCEL1) + (TIME - 1PREV)/DT C	ACCEL= ZACCEL(1) - (ZACCEL(1) - ACCEL1) + (TIME - 1PREV)/DT	ACCEL 1) * (TI	ME - 1PREV)/DT	
06	C CALCULATE DERIVATIVES C DRIVAL(1) = DISPLACEMENT C DRIVAL(2) = VELOCITY C DRIDERV(1) = DERIVATIVE OF DRIVAL(1) C DRIDERV(2) = DERIVATIVE OF DRIVAL(2)	VATIVES DISPLACEMENT VELOCITY * DERIVATIVE OF DRIVAL(1) * DERIVATIVE OF DRIVAL(2)	(1)	# # # # # # # # # # # # # # # # # # #	
S	DRIDERV(1) = DRIVAL(2)  DRIDERV(2) = ACCEL - 23.7 + DRIVAL(2) - 2798.41 + DRIVAL(1)  C  C********************************	= DRIVAL(2) = ACCEL - 23.7 + DRIV	AL(2) - 2798.	2) 23.7 • DRIVAL(2) - 2798.41 • DRIVAL(1) ************************************	
00 R0 R0	Call RUNGE(2, DRIVAL, DRIDERV, IPREV, DT, IP)  30 CONTINUE C C++++++++++++++++++++++++++++++++++	RUNGE(2.DRIVAL.DRIDERV, TPREV.DT.IP) NUE	V,DT.IP)  CONSTANT TO (98.41/GRAVITY	08 TAIN THE	• • •
01	C CHECK FOR MAXIMUM VALUE	IVAL(1)			

```
83/11/07. 09.41.53
FTN 4.6+428
74/74 OPT=1
                                                             900 CONTINUE
ACCEL 1=ZACCEL(1)
TPREV= TIME
999 CONTINUE
RETURN
END
 SUBROUTINE DRICALC
                        Ü
                        115
                                                               120
                                                                                                       125
```

PAGE

5

2

25

METHOD - TH ST ST MAKUNICATIONS -			CASTEMS
ST PO POWICATIONS -	INE C	THE CHECKS FOR DROGUE PROJECTION, LINE	ON, LINE
COMMUNICATIONS -	STRETCH, AND FULL INFL POSITION AND VELOCITY	ATTON, THEN COMPI	JTES THE CHUTE'
	!		
CALLED BY:	į		
CALLS:	CHOIRS		
3	CHUTEM		
<b>5</b>			
2 6	PCHUIFI		
<b>8</b> 2	ZARCIAN		
12	ZLININI		
<b>VAR</b>	. ;		
,	TOTAL VELOCITY OF THE	THE DROGUE SYSTEM	
YLENGIH - CD	COMPONENTS OF THE LENG	OF THE LENGTH OF THE EXTENDED DROGUE	ED DROGUE LINES
٠	PRIOR TO LINE STRETCH	1CH	
TLENGTH - TO	TAL LENGTH OF THE EX	TENDED DROGUE LTI	VES PRIOR TO
	LINE STRETCH		
, SIOX	COMPONENTS OF THE VECTOR FROM THE DROGUE ATTACHMENT	OR FROM THE DROG	JE ATTACHMENT
	POINT TO THE DROGUE CHUTE	E CHUTE	
POTENTIAL ERROR CONDITIONS	C POTENTIAL ERROR CONDITIONS - NONE		
MATRIX COMMON BLOCK	C		*******
> 1 C 1 4 7 / 1 C 1 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	***************************************	**************************************	***************************************
COMMON / MAIN	) DCMSF(3.3)	-	(3.3)
•	3).	3,3).	DCMSR(3,3)
•	DCMDUM(3,3)		
ISCELLANEOUS DA	MISCELLANEOUS DATA COMMON BLOCK		
	:	:	***********
COMMON /MISC	`	. LINECI(31)	. IPRICAL(31)
	TANLING		. MAAEVA
• •	IDATE	HEADALT	HEADVEL
•	HEADSR	HEADYAW	HEADPIT
•	HEADROL	. HEADWGT	. BIAS
•	REPTYPE(5,31)	. PRTLNGT(2)	, PRIWGHT(2)
+	IHEADER(24)	, 1EVENTS(38)	80
•	***************************************	INVDC	. PRTEMP( 2)
• •	ZVECT(2)	YKIIMUA XV2(3)	. PREVEL SAVIIME
• •	XACCEL(3)	YACCEL(3)	ZACCEL (3)
INTEGER	REPTYPE	BIAS	PRTLNGT
+ 1	PRIWGHT		200
	TX LEEP	. PRIMADO . PRIMADA	YALIXA.

9

35

**Q** 

45

20

	+ KSSOCA(2)	COMMON /MOMARMS / REFLNSO ,REFLNOA XSSOCA(2),YSSOCA(2 XSSORRE ,YSSORRE	COMMON /WOMARMS / +REFLNSO , REFLNSA , URX(6) +XSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORRE , ZSSORRE , ZSSORR	.uRX(6) .URY(6) .xSSORK(6).YSSORK( .xSSOLRE .YSSOLRE	.URY(6) .URZ(6) . .YSSORK(6).ZSSORK(6). .YSSOLRE .ZSSOLRE .		
	+XSSQSB(6) +XSSCSAC +XSSASRP +XSSASRP	).YSSOSB(6) .YSSCSAC .YSSASRP	7. ZSSCSAC ZSSCSAC ZSSASRP ZSSASRP	XRRCSAC YRRCSAC XSSOSRP YSSOSRP XRSOSRP XRSOSRP XRSOSRP XRROAP(2)	ZRRCSAC ZSSOSRP ZARMPE 2).ZRRDAP(2).		
	+XRRSBO(6) +XSSDAP(2) +XSSDAP(2) +XRSDSB +XRSDSB +XRRSB +XRRSDACSO +XRSOAC	), YRSBO(6) ), YSDAP(2) , YSRCSAC , YRSDSB , YRSB , YRSCSO , YRSCSO	ZRRSBO(6), ZSSDAP(2), ZSRCSAC . ZRSOSB ., ZRRSB	.XSSOCP(2),YSSOCP(2),ZSSOCP(2),XESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESDAC ,ZESSOCH(3),YSSOCH(3),XSSOCH(3),YSSOCH(3),YSSOCH(2),YSCPAP(2),ZSCPAP(2)	2).ZSSOCP(2). ,ZESOAC., ,ZSSOAC., ,ZRRSB01. 3).ZSSOCH(3). ,ZASOAC		
ပီပ	C SECTION 14 CC	TION 14 COMMON BLOCK	· X		***	•	
5	COMMON /I	COMMON /PARCHUT /	COMMON /PARCHUT / IRECOV		. RECOVLL . POROSR		
	+ +		XRECAP NPTSRLS	YRECAP RECOVIS(2,25)	. ZRECAP . IFTRECV	•	
	•		NPTSRFT	RECOVET(2,25)	• •		
	+ +	-	IDROGUE POROSO2	. DRDRAG2	, DROGPD2	•	
	•	_	NPTDF 12	, DROGFT2(2,25)			
	• +	•	NPTDFT1	. DROGFT1(2,25)	. IDROGLS		
	• •	_	DISPLOY	DROGLL			
	+	_	DROGPD 1	. POROSD 1	. DROVELX	•	
	• •		DROVELY	, DROVEL2	. XDROGAP	•	
		•	CHAL 12	GLIMIT	TDELAY		
	+	,	AREADC	WGHTDC	TFP1		
	• •	_	TFP2 CDDC	TFP3	. TDROGLS	. (36)	
U		********	•••••••		**********		
U	C INTEGRATION ROUTINE COMMON BLOCK	ROUTINE CO.	GRATION ROUTINE COMMON BLOCK		•	• • •	
ر	COMMON /RKUITA	RKUTTA /	TIME , TIMES	, DELTAT	TRAJS0(193)		
	•		TRAJSA( 193)	. TRAJOA(193) .	TRAJCH( 97, 3)	•	
	•		TRAJAC( 193)	TVCEQS(225)	QUATS0(65)	•	
	+		QUATSA(65)	. QUATOA(65)	QUATAC(65)	•	
	•		INISTR	. IPCPASS	IRKPASS	•	
	• •		SINIOAI	. 1 V X	I YPKX	•	
	•		1 X X		1777007	-	
			1713%	×LOGAL	1 1 2 2 1 4 %	•	
	•		I V PRI 2 X	XIAGI	I DY I IX	-	
	•		ICYIX	107111	IREIN		
U							
U							

PAGE

U

1.5

```
C CHECK FOR DROGUE CHUIE LINE STREIGH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C DETERMINE HOW FAR DROGUE LINES ARE STRETCHED

C CONTROL OF THE C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C CHECK FOR DROGUE CHUIE FULL INFLATION

Conservation to the contract of the c
IF(IEVENTS(18) .NE. O) GDTD 100
IF(INISTP .EQ. O) GDTD 500
IF(INIES .LT. TDDPLOY) .OR. (ABS(ZRRSBOT) .LT. DISPLOY))GDTD 500
IEVENTS(18) * 1
TIMES(18) * TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLENGTH = SQRT (XLENGTH+XLENGTH+YLENGTH+YLENGTH+ZLENGTH+ZLENGTH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALL PCHUTFI(TVEL, DROGPD1, DRDRAG1, POROSD1, TFP1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALL ROTATE(XYZ(1), XYZ(1), ZVECT(1), DCMSE, 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XLENGTH = TRAJSO(2) - TRAJCH(2,1) + XYZ(1)
YLENGTH = TRAJSO(3) - TRAJCH(3,1) + XYZ(2)
ZLENGTH = TRAJSO(4) - TRAJCH(4,1) + XYZ(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF(IEVENTS(20) .NE. 0) G0T0 200
IF(INTSTP .EQ. 0) G0T0 200
IF(TIMES .LT. (TIMES(19) + TFP1)) G0T0 200
IEVENTS(20) = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(IEVENTS(19) .NE. 0) GDTD 150 IF(INTSTP .EQ. 0) GDTD 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               XYZ(1) = XSSOCH(1)
XYZ(2) = YSSOCH(1)
XYZ(3) = ZSSOCH(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11MES(20) * 11ME
                                                                                                                                                                                                                                                                                                                                                                                                      CALL CHUINIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6010 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            150 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ပ
                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              170
```

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                           C COMPUTE DROGUE CHUIE FORCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      410 FORMAI(2x,//72(1H+)/,4x,"FATAL ERROR(SUBROUTINE DROGUE1)*** + "R EQUAL TO ZERO RESULTS IN DIVISION BY ZERO",/,72(1H+))
FTN 4.6+428
                                                                                                                                                                                                                                                                                                                         R = SQRT(TRAUSO(14)-TRAUSO(15) + TRAUSO(15)-TRAUSO(15) + TRAUSO(16)-TRAUSO(16))
                                                                                                                                                                                                                                                                                                                                                                                                                                                 XDIS =-SIGN((DRGGLL-COS2+COS(BETA)),TRAJSO(14))
YDIS =-SIGN((DRGGLL-COS2+SIN(BETA)),TRAJSO(15))
ZDIS =-SIGN((DRGGLL+SIN2),TRAJSO(16))
                                                                                                                                                                                                                                                                                            CALL ROTATE(XYZ(1), XYZ(1), ZVECT(1), DCMSE, 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IRAJCH(2.1) = XYZ(1) + XDIS + TRAJSD(2)
TRAJCH(3.1) = XYZ(2) + YDIS + TRAJSD(3)
TRAJCH(4.1) = XYZ(3) + ZDIS + TRAJSD(4)
GDTO 500
                                                                                                                                                                                                                                                                                                                                                                      IF(R .EQ. 0.0) GDTO 400
SIN2 * TRAJSO(16)/R
COS2 * COS(ASIN(SIN2))
BETA * ZARCTAN(TRAJSO(15),TRAJSO(14))
                                                                                                                      CALL CHUTFM(1, DROGPD1)
0PT = 1
                                                                                                                                                                                                                                XYZ(1) = XSSOCH(1)
XYZ(2) = YSSOCH(1)
XYZ(3) = ZSSOCH(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WRITE(5,410)
14/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TERRFLG *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 500 CONTINUE
RETURN
END
                                                                                                         200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          400 CONTINUE
SUB. JUTINE DROGUE1
                                                                                                                                                                                                                                                                                 ပ
                                                                                                                                                                                                                                                                                                                                                          U
                                                                                                                                                                                                                                                                                                            ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                     U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ပပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ပ
                                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    215
                                                                                                                                                                       6
                                                                                                                                                                                                                                                 185
                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202
```

SUBROUTINE DROGUE2 C	FUNCTION - CONTRO METHOD - THIS R AND FU THEN C CALLED BY CALLED BY CHUTES	CALLS NON-COMMON VAR TVEL	XLE YLE ZLE TLE	C XDIS - C YDIS - COMPONENTS OF THE VECTOR FROM THE DROGUE ATTACHMENT - C ZDIS - POINT TO THE DROGUE CHUTE C C POTENTIAL ERROR COMDITIONS - NONE	C.C	C. MISCELLANEOUS DATA COMMON BLOCK  C. MISCELLANEOUS DATA COMMON BLOCK  C. MISCELLANEOUS DATA COMMON NO. C. MISCE / IPAGECI(31) LINECT(31) LINECT(31)  LINECT(31) LINECT(31)	HERFIG HEADYAW HEADWGT HEADWGT	+ HEADER(24) , IEVENTS(38) . TIMES(38)
-	n ç	5 <del>ř</del>	2 ;	20 21 20 21	) kn	Q.	8 8	50 85

PAGE

SAC   CASONER	URX(6) , URY(6) , URZ(6) , XSSORK(6), XSSORK(6), XSSORK (7850RR 7850RR 7850B0T	URX(6)URY(6)URZ(6)XSORK(6)XSORK(6)XSORK(6)XSORK(6)XSORK(6)XSORK(6)XSORREXSORREXSORREXSORDIXSORDIXSORDIXSORDIXSORDIXSORPX		OMARMS COMMO	N BLOCK				•	
VRX(6) . URY(6) . URZ(6) . XSSORK(6) . XSSORK(6) . XSSORK(6) . ZSSORRE . XSSORE . XSSORE . XSSORD . XSSORD . XSSORD . XSSORD . XSSORP . ZSSORD . XSSORP . XSSORP . ZSSORP . ZS	VRSGBK(6), URZ(6), URZ(6), XSSGRK(6), XSSGRK(6), XSSGRK(6), ZSSGRR (6), ZSSGRR (6), ZSSGRR (6), ZSSGRR (7), ZSSGRD 1, ZSSGRD 1, ZSSGRD 1, ZSSGRD 1, ZSSGRD 1, ZSSGRP (2), ZSCRPP (2), ZSCR	VSSORK(6), URZ(6), URZ(6), XSSORK(6), XSSORK(6), XSSORK(6), ZSSORRE, XSSORRE, XSSORCH(2), ZSSOCP(2), ZSSOCP(2), XSSOCP(2), ZSSOCP(2), XSSOCP(2), ZSSOCP(2), XSSOCP(3), ZSSOCP(3), XSSOCP(3), ZSSOCP(3), ZSCPAP(2), ZSCPAP	•	********	•••••••	•••••				•
XSSORK(6), YSSORK(6), ZSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORRE, YSSORRE, YSSORC, ZSSORC, YSSORC, YSCORC, YSSORC, YSCORC, YSSORC, YSCORC, YSSORC, YSSORC	XSSORK(6), YSSORK(6), ZSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORRE, YSSORRE, YSSORDT, XSSORDT, YSSORP, ZSRAPPE, YSSORP(2), ZSSORPE, ZSRAPPE, YSSORP(2), ZSSORPE, ZSSORPE, YSSORPE, ZSSORPE, ZSSORPE, YSSORPE,	XSSORK(6), YSSORK(6), ZSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORK(6), XSSORRE, YSSORRE, YSSORRE, YSSORRE, YSSORRE, YSSORRE, YSSORRE, ZSCORP(2), ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, YSSORPE, YSSORPE, ZSSORPE, YSSORPE, ZSSORPE, YSSORPE, ZSSORPE, YSSORPE, ZSSORPE, YSSORPE, ZSSORPE, ZSSORPE, YSSORPE, ZSSORPE, Z		₹	DMARMS /	4 0 14 0 14 0 14 0 14 0 14 0 14 0 14 0	(a) x (a)	(9)/011	1107(6)	
XSSOLRE	XSSQLRE	XSSOLRE		6	VERDOA(2)	2 SCOCA(2)	YCCOPK(A)	. VSSOBKIR	) Zecoby(A)	
XSSOBOT YSSOBOT ZSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT ZSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOSRP ZSSOSRP ZSSOCP(2), YSSOCP (2), YSSOCC ZESOAC XSSOCP(2), YSSOCC ZESOAC XSSOCH(3), YSSOCC ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSSOCH(3), YSSOCH(3), ZSSOCH(3), ZSSOCH(3), ZSCPAP(2), XSSOCH(3), YSCPAP(2), ZSCPAP(2), XSSOCH(3), YSCPAP(2), ZSCPAP(2), YSCPAP(2), ZSCPAP(2), YSCPAP(2), YSCPAP(2), ZSCPAP(2), YSCPAP(2), YSCP	XSSOBOT YSSOBOT ZSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT ZSSOBOT ZSSOBOT XSSOBOT ZSSOBOT XSSOBOT ZSSOBOT XSSOBOT ZSSOBOT XSSOSP ZSSOCP(2), YSSOCP(2), YSSOCP(2), ZSSOCP(2), XSSOCP(3), YSSOCC ZSSOCC XSSOCC XS	XSSOBOT YSSOBOT ZSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT ZSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOBOT XSSOSRP ZSSOSRP ZSSOSRP ZSSOCP(2), YSSOCP (2), YSSOCC ZSSOAC XSSOCH(3), YSSOCC ZSSOAC XSSOCH(3), ZSSOCH(3), ZSCOPAP(2), ZSCOPAP(		+ x C C U D D C		745000	XSSOLDE	VSSOLBE	75501 PF	
XSSOSRP (250SRP (250SR	XSSOSRP (XSSOSRP (XSSOGR (XS	XSSOSRP (XSOSRP (XSOSR			10000		100000	100000	700000	
XXXXCSAL . XXXCSAL . XXXCSAL . XXXCSAL . XXXCSAL . XXSOSRP . XXSOSRP . ZXSOSRP . ZXSOSRP . ZXSOCR(2) . ZXSOCR(2) . ZXSOCR(2) . XXSOCAC . YSSOCA . ZSSOCAC . XXSOCAC . YSSOCAC . ZSSOCAC . XXSOCAC . YXSOCAC . ZXSOCAC . XXSOCAC . XXSOCAC . XXSOCAC . XXSOCAC . XXSOCAC . ZXSOCAC . XXSOCAC . ZXSOCAC . XXSOCAC . ZXSOCAC . ZXSOCAC . XXSOCAC . ZXSOCAC . ZXSOCAC . ZXSOCAC . ZXSCCAC .	XXXXCSAL . XXXCSAL . XXXCSAL . XXXXCSAL . XXXXCSAL . XXSOSRP . XXSOSRP . ZXSOSRP . XXSOCP(2) . XSSOCP(2) . XSSOCP(2) . XSSOCP (2) . XSSOCP (2) . XSSOCC . XXSOAC . XSSOCH (3) . XSCPAP(2) . XSSOCH (3) . XSCPAP(2) .	XXXXCSAL . XXXCSAL . XXXXCSAL . XXXXCSAL . XXXXCSAL . XXSOSRP . XSSOSRP . ZSSOSRP . XSSOCP(2) . XSSOCP(2) . XSSOCP(2) . XSSOCP . XSSOCC . YSSOCC . YSSOCC . YSSOCC . YSSOCC . XSSOCH . XSCPAP (2) . XS		TASSUMIKE.	, rosomice	, CSSUMIKE	Dancey.	000000	. 1000027	
XSSOSRP , YSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOCP (2) , XSSOCP (2) , XSSOCP (2) , XSSOCP (2) , XSSOCP (2) , ZSSOCP (2) , XSSOCP (2) , ZSSOCP (2) , XSSOCP (3) , ZSSOCP (3) ,	XSSOSRP , YSSOSRP , ZSSOSRP , ZSSOCP(2) , XSSOCP(2) , XSSOCP(2) , ZSSOCP(2) , XSSOCP (2) , ZSSOCP (2) , ZSSOCP (2) , ZSSOCP (3) , ZSCPAP (2)	XSSOSRP , YSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , ZSARMDAP(2) , XSSOCP(2) , XSSOCP(3) , XSSOCP(3) , ZSSOCP(3) , ZSCOPP(2) , ZS		+455058(6)	. 155058(6)	. 255058(6)	. AKKCSAC	TERCSAL.	. ZKKUSAU	
XRRDAP(2), VRRDAP(2), ZRRDAP(2), XRSDAP(2), XRSDAP(2), XRSDAP(2), XRSDAC (2), 2SGAC (2), 2GAC (2),	XRBDAP(2), YRRDAP(2), ZRRDAP(2), XSSGCP(2), ZSSGCP(2), ZSSGCP(2), ZSSGCP(2), ZSSGCP(2), ZSSGCP(2), ZSSGCP(2), ZSSGCP(3), ZSSGCP(3), YSSGCP(3), ZSSGCP(3), YSSGCP(3), ZSSGCP(3), YSSGCP(3), ZSGCPP(3), YSSGCPP(3), ZSGCPP(3), YSCCPPP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), YRCCAP, Y	XRBDAP(2), YRRDAP(2), ZRRDAP(2), XSSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(2), ZRSGCP(3), YRSGCP(3), ZRSGCP(3), YRSGCP(3), ZRSGCP(3), YRSGCP(3), ZRSGCP(3), YRSGCP(3), ZRSCCPP(2), Z			. YSSCSAC		.XSSOSRP	, YSSOSRP	. ZSSOSRP	
XRRDAP(2), YRRDAP(2), ZRRDAP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(2), XSCCAP(2),	XRRDAP(2), YRRDAP(2), ZRRDAP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(3), XSCPAP(2),	XRRDAP(2), YRRDAP(2), ZRRDAP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(3), XSSOCP(2),		+					ZAPMPE .	
XSSOCP(2), YSSOCP(2), ZSSOCP(2), XESOAC XSSOAC YSSOAC ZESOAC XSSOCH(3), YSSOAC ZESOAC XSSOCH(3), YSSOCH(3), ZSSOCH(3), ZS	XSSOCP(2), YSSOCP(2), ZSSOCP(2), XESOAC YESOAC ZESOAC XSSOCH(3), YSSOCH(3), ZSSOCH(3), XASOAC YASOAC ZSSOCH(3), XASOAC YASOAC ZASOAC XSSCCH(3), YSCPAP(2), ZSCPAP(2), XASOAC YASOAC ZASOAC XSCCAP(2), YSCPAP(2), ZSCPAP(2), XASOAC YASOAC ZASOAC XSCPAP(2), YSCPAP(2), ZSCPAP(2), XASOAC YASOAC ZASOAC XSCPAP(2), ZSCPAP(2), XASOAC YASOAC ZASOAC XSCPAP(2), ZSCPAP(2), XASOAC YASOAC XSCPAP(2), ZSCPAP(2), XASOAC YASOAC XSCPAP(2), ZSCPAP(2), XRCCAP ZECAP XECOVET(2,25), IFTRCA XRCCAP XRCC	XSSOCP(2), YSSOCP(2), ZSSOCP(2), XESOAC YESOAC ZESOAC XSSOCH(3), YSSOCH(3), XASOAC YASOAC ZSSOCH(3), XASOAC YASOAC ZASOAC XSSOCH(3), YSSOCH(3), ZSSOCH(3), XASOAC YASOAC ZASOAC XSCAPP(2), YSCAPP(2), ZSCAPP(2), XASOAC YASOAC ZASOAC XSCAPP(2), YSCAPP(2), ZSCAPP(2), XASOAC YASOAC ZASOAC XSCAPP(2), YSCAPP(2), ZSSOCH(3), XRECAP RECOVER RECOVED PORGSR YRECAP RECOVER RECOVET(2, 25) IFTRECV RECOVET(3, 25) ITRACO RECOVET(3) ITRACO RECOVET(4) IN IN INTIX IVITIX IVITIX IVITIX IVITIX IPPRIX ICVITX IREIN			VSCASDP	7554500	X PODDAP(2)	YRRDAP(2	) ZBRDAP(2)	
XSSOCK (2.500C) (2.50	XSSUCY(2), 753UCF(2), 533UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 535UCF(2), 235UCF(2),	XSSUCY(Z), YSSUCY(Z), XSSUCY(Z), XSSUCY(Z), XSSOAC XSCOAP(Z), XSCCAP(Z), XS		( 4 ) O G U G G X .		1000000			(6)00000	
XESOAC (YESOAC ZESOAC XSSOAC (YSSOAC (YSSOAC XSSOAC XSSOAC (YSSOAC ZSSOAC XSSOAC (YSSOAC XSSOAC (YSSOAC (YSCOAC (YSCOA	XESOAC , YESOAC , ZESOAC , XSSOAC , YSSOAC , YSSOAC , XSSOAC , ZSSOAC , XSSOAC , XSSOAC , ZSCAPP(2), ZSCAPP(2) , ZSCAPP(2)	XESOAC		TARREDO ( 0)	TERMODICAN.	CKKSBO(0)	. A330CF ( Z )	, 1300cr ,	1,4330cr (4).	
XSSDAC .YSSDAC .ZSSDAC .XSSDAC .XSSDAC .XSSDAC .XSSDAC .ZSSDCH(3), YSSDCH(3), ZSSDCH(3). XSSDCH(3), YSSDCH(3), ZSSDCH(3), XSSDCH(3), ZSSDCH(3), XSSDCH(3), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCPAP(2), ZSCAP .XSCDAP .ZSCAP .ZSC	XSSOAC .YSSOAC .ZSSOAC .XSSOAC .XSSOAC .YSSOAC .ZSSOAC .XSSOAC .YSSOCH(3).ZSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOAC .YSSOAC .YSCOAC	XSSOAC .YSSOAC .ZSSOAC .XSSOAC .XSRSBOT .ZRRSBOT .ZRRSBOT .ZRSBOT .ZRSBOT .XSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOCH(3).XSSOCH(3).XSCPAP(2).Z		+XSSDAP(2)	. YSSDAP(2)	, ZSSDAP(2)	, XESOAC	. YESDAC	. ZESOAC .	
XRRSBOT .YRRSBOT .ZRRSBOT .XSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSCPAP(2)	XERSBOT .YRRSBOT .ZRRSBOT .XSSOCH(3).ZSSOCH(3).XSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSCPAP(2).XSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCPAP(2).ZSCAP(2	XRRSBOT .YRRSBOT .ZRRSBOT .XSSOCH(3).ZSSOCH(3).XSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSSOCH(3).ZSCDAC .YASDOC .ZASOAC .ZASOA			YSRCSAC	ZSRCSAC	XSSOAC	YSSOAC	ZSSOAC .	
XSSOCH(3), YSSOCH(3), ZSSOCH(3), XASOAC XASOAC XSCPAP(2), YSCPAP(2), ZSCPAP(2), XSCPAP(2), YECAP RECOVET(2,25) IFTRECV RECOVET(2,25) IRRAPASS ITRACOMMAN ITRACOMMAN INPARSON INCENSING INPRINT INCENSING INPRINT INPR	XSSOCH(3), YSSOCH(3), ZSSOCH(3), XASOAC XASOAC XSCRAF(2), YSCPAP(2), ZSCPAP(2), XSCPAP(2), ZSCPAP(2), ZSCCAP RECOVET(2,25), IFTRECV RECOVET(2,25), IRRAGEL RECOVET(2,25), IRRAGEL RECOVET(2,25), IRRAGES RECOVET(2,25), IRRAGE	XSSOCH(3), YSSOCH(3), ZSSOCH(3), XASOAC XASO			00000		YDDCDU	VDDCBOT	ZDDCBOT	
XSCDAC (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	XSCRAC . YASDAC . ZASOAC . XASOAC . XAS	XSCPAP(2),		0	00000	2000	ייים מייייי	000000	. CONTROLL OF	
XASOAC , VASOAC , ZASOAC , XASOAC , XASOAC , XASOAC , XSCPAP(2), ZSCPAP(2), ZRECAP , RECOVPT(2,25) , IFTRECV , RECOVPT(2,25) , IFTRROT , DROGET 1(2,25) , IFTRROT , DROGET 1(2,25) , IFTRROT , DROGEL , DROGEL , DROGEL , DROGEL , DROGEL , DROGAP , DROGEL , DROGAP , CHALT 1 , CHAL	XASOAC , VASOAC , ZASOAC , XASOAC , XASOAC , XASOAC , XSCPAP(2), ZSCPAP(2), ZRCAP , RECOVFT(2,25) , IFTRECV , RECOVFT(2,25) , IFTDRO1 , DROGELS , DROGES , DROGELS , DROGELS , DROGELS , DROGELS , DROGELS , DROGES , DROGELS , DROGELS , DROGELS , DROGELS , DROGELS , DROGELS , DROGES , DROGES , DROGES , DROGELS , DROGEL	XASDAC , VASDAC , ZASDAC , XASDAC , XASDAC , XASDAC , XSCPAP(2), ZSCPAP(2), ZRCAP , RECOVET(2, 25) , IFTRECV			TKK30	CKKSD.	C PUNCCY.	י בשמכנו י	1,235ucm(3).	
XSCPAP(2), YSCPAP(2), ZSCPAP(2),  YEPPLOY RECOVLL  FRECOVED PORGSR  YECOAP SECAP  RECOVET(2,25) IFTRECV  RECOVET(3,25) IFTRECV  RECOVET(3,25) IRPORT(3)  IFP3 CHALTI  GLIMIT TFP1  TFP	XSCPAP(2), YSCPAP(2), ZSCPAP(2),  YECAP  RECOVLE  RECOVET(2,25)	XSCPAP(2), YSCPAP(2), ZSCPAP(2)  TRDPLOY  TRDPLOY  TRECOVE  TRECOVE  TRECOVET(2,25) TETRECY  TRECOVET(2,25) TETRECY  TRECOVET(2,25) TETRECY  TRECOVET(2,25) TETRECY  TRECOVET(2,25) TETRECY  TRECOVET(2,25) TETRECY  TROGGET  TROGGE			. YAACSO	, ZAACSO	.XASOAC	. VASDAC	. ZASOAC	
TRDPLOY   RECOVLL   RECOVLL   RECOVED   PORGSR   RECOVED   PORGSR   RECOVED   PORGSR   RECOVED   PORGSR   RECOVED   PORGSR   RECOVED	TRDPLOY   RECOVLL   RECOVLL   RECOVPD   PORGSR   YRECAP   RECOVLS(2.25)   IFTRECAP   RECOVLT(2.25)   IFTRECAP   RECOVT(2.25)   IFTRECAP   RECOVT(2.25)   IFTRECAP   RECOVT(2.25)   IFTDRO1   DROGFT2(2.25)   IDDPLOY   DROGLS(2.25)   IDDPLOY   DROGLS(2.25)   IDDPLOY   DROGLS   TRDPLOY   DROGLS   TRDPLOY   DROGLS   TRDPLOY   TRPA	TRDPLOY   RECOVLL   RECOVLL   RECOVPD   PORGSR   RECOVLS(2.25)   IFTRECAP   RECOVLT(2.25)   SEPFRCE   DRORAG2   DROGFO2   DR			. YRSOAC	. ZRSOAC	, XSCPAP(2)	VSCPAP(2	), ZSCPAP(2)	
TRDPLOY	TRDPLOY   RECOVLL	TRDPLOY   RECOVLL	•	***********		********		*********	**********	••••
REDPLOY   RECOUL   RECOUL   RECOUL   RECOULD   PORGOSR   VECCAP   ZECAP   RECOULS (2.25)   IFTRECY   RECOVET (2.25)   IFTRECY   RECOVET (2.25)   IFTRECY   RECOVET (2.25)   IFTRECY   IFTER   IFTRECY   IFTER   IFTRECY   IFTREC	TRDPLOY	TRDPLOY   RECOUL     TRDPLOY   RECOUL     YECAP   ZRECAP     RECOVET(2.25)   IFTRECY     RECOVET(2.25)   SEPFRCE     DRORAG2   DROGGPO2     VELCON   IFTDRO1     DROGFT2(2.25)   IFTDRO1     DROGFT1(2.25)   IDPLOY     DROGFT1(2.25)   IDPLOY     DROGFT1(2.25)   IDPLOY     DROGFT   TOPLOY     DROGEL   DROGGS     DROGEL   DROGGS     DROVELZ   XOROGAP     CHANT   TEP     TEP   TEP		SECTION 14 CON						•
TRDPLOY RECOVLL  RECOVPD PORGSR  YECAP  RECOVIS(2.25) IFTRECV  RECOVFT(2,25) SEPFRCE  DRORAG2 DROGPD2  VELCON IFTDRO1  DROGFT1(2,25) IFTDRO1  DROGFT1(2,25) IFTDRO1  DROGLL DROGLS  DROGLL DROGLS  DROGLL DROGLS  DROGLL DROGLS  DROGLL DROGLS  DROGLL TFP1  CLIMIT TFP1  CLIMIT TFP1  CLIMIT TFP1  TEP1  TEP1  TEP1  TRAJOR(193) TRAJCH(97,3) TRCCOVDT(2,25)  OUATDA(193) TRAJCH(97,3) TRCCOS(225) QUATSO(65)  OUATDA(193) TRAJCH(97,3) TRCCOS(225) QUATSO(65)  OUATDA(193) TRAJCH(97,3) TRCCOS(225) QUATSO(65)  OUATDA(193) TRAJCH(97,3) TRCCOS(225) QUATSO(65)  TOTAL TRAJCH(97,3) TRAJCH(97,3) TRCCOS(225) QUATSO(65)  OUATDA(193) TRAJCH(97,3) TRAJCH(97,3) TRCCOS(225) TRRPASS  INTERNATION TRAJCH	TRDPLOY RECOVLL  RECOVED PORGSR  YECAP  RECOVIS(2.25) IFTRECV  RECOVIS(2.25) IFTRECV  RECOVET(2.25) IFTDR01  DROGFT2(2.25) IFTDR01  DROGFT2(2.25) IFTDR01  DROGFT2(2.25) IFTDR01  DROGFT2(2.25) IFTDR01  DROGFT3(2.25) IFTDR01  DROGET3(2.25) IFTDR01  DROGET3(2.25) IFTDR01  DROGET3(2.25) IFTDR01  DROGET3 IFTDR01  DROGET3 IFTDR01  TRDCAS IFTDR01  TRDCAS IFTDR01  TRDCASS ITRACH(97.3) ITACH(97.3)  TVCCOS(225) QUATAC(65) ITACH  INTIX IFTRACION  TYTIX IF	TRDPLOY RECOVLL  RECOVPD PORGSR  YECAP ZECAP  RECOVFT(2,25) IFTRECV  RECOVFT(2,25) SEPFRCE  DROGAG2 (172,25) IFTDRO1  DROGFT1(2,25) IFTDRO1  DROGFT1(2,25) IFTDRO1  DROGLL DROGGSS  DROGGLS(2,25) IDROGGS  DROGGL (172,25) IDROGGS  DROGGL (174) IDROGSS  DROGAP (174) IDELAY  WGHTDC TFP1	,					4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	1	
TREGRADY   TRECOVE   TRECOVE	TROUGHOUS   TRECOVE   TR	TRDMON   PARCHIT   TRECOV   TROPLOY   TRECOVEL							:	
RECDRAG   RECOVPD   PURDOSR	RECDRAG   RECOVPD   PORBOSR	RECDRAG   RECOVPD   POROCSR		COMMON /Pr	•	RECOV	. TRDPL	ָס.	. RECOVLL	•
TRECAP   VRECAP   V	YRECAP	YRECAP   Y		+	<u>α</u>	ECDRAG	. RECOV	PD	. POROSR	•
PPTSRLS   RECOVLS(2.25)   IFTRECY	PPTSRLS   RECOVLS(2.25)   IFTRECV	PRINTER   RECOVES(2.25)   IFTRECY		+	×	RECAP	YRECA	٩	ZRECAP	
NPTSRLS   RECOVET(2.25)   SEPERCE	NPTSRLS   NECOVETIC   SEPRECE	NPTSRL3   RECOVET(2.25)   SEPERCE		•	2	DICOL C	10000	11 5 (1) 15)	TETOECN	•
NPTSRF   NPTSRF   NPTSRF   NPTSRF   NPTSRF   NPTSR	NPTSRF   NECUCT   N	NPTSRF1   NECUVITICA, 29   SEPRICE		•	2 3	FISELS DATES	. 8000	112(2.23)	71217	
PROBAGE   DRORAGE   DRORAGE   DROGGPD2	DRORAGE   DRORAGE   DROGGPD2	DRORAGE   DRORAGE   DROGGPD2		•	Z	FISK!	. KECU	2	. SEPTRUE	•
PORDSD2   VELCON   IFTDR02   IFTDR02   IFTDR04   NPTDFT2   DROGFT1(2,25)   IFTDR04   IFTDR06	Harden   H	PORDSD2   VELCON   IFTDR02   NPTDFT2   DROGFT4(2,25)   IFTDR01   NPTDFT3   DROGFT4(2,25)   IDROGLS   NPTSDLS   DROGELS   DROGELS   DROVELX   DROGELX   DROVELX   DRO		+	_	DROGUE	. DRORA	162	, DROGPD2	•
NPTDFT2   DROGFT2(2.25)   IFTDROI	NPTDFT2   DROGFT2(2.25)   IFTDROT	+ NPTDFT2		+	هَ	OR05D2	. VELCC	Z	, IFTDR02	•
Head	PPTDET1   DROGFT1(2.25)   IDROGLS	Head		+	Z	PT0FT2	DROGF	12(2.25)	. IFTDRO!	•
NPTSDLS   DROGLE   DROVELY   DROGLE   DROVELX   DROVEL	NPTSDLS   NPGCLS   TODPLOY	NPTSDLS   DROGLS   TODPLOY		+	2	PTOFT	Johnst	T1(2 28)	1 DDDG1	
PISOLS   PROBLET   PROBLET	PUBDIC   PUBDIC   PUBDIC   PUBDIC	PURDACE   PURDACE   PURDACE			2 :	10101		(20.07)	20.000	-
+ DISPLOY DROGLL DROWAGI  + DROGED POROSDI DROVELX  + FOROGAP DROVELZ CHALTI  CHALTZ GLIMIT TDELAY  + AREADC GLIMIT TDELAY  + TFPZ TFP3 TDROGLS  - TFPI  TFPZ TFP3 TDROGLS  - TFPI  TRAJCC CODC TFP3  - TRAJCC CODC TFP3  - TRAJCC CODC TTPI  - TRAJCC CODC TFPI  TRAJCC COMMON (RKUTTA / TIME TIMES DELTAT TRAJCC (93) TRAJCC	DISPLOY   DROGLL   DROWAGI   DROWELX   DROGED   DROGED   DROGED   DROWELX   DROWELX   DROWELX   DROWELY   DROWELY   DROWELY   DROGAP   CHALTI   CHALTI   CHALTI   TFP	DISPLOY   DROGLL   DROWAGI		•	2	IF I SULS	. האחפר	(67,2)	· IDDFLOT	•
DROGED   DROGED   DROVELX	+ DROGED1 , DROVELX , DROVELX , XOROGAP	DROGED1   DROVELX   DROVELX   DROVELX   TOBOUELX   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TOBOUGAP   TFP1   TFP2   TFP2   TFP1   TFP1   TFP1   TFP2   TFP2   TFP1   TFP1   TFP2   TFP2   TFP1   TFP1   TFP2   TFP2   TFP1   TFP2   TFP2   TFP1   TFP2   TFP2   TFP3   TFP4   TFP4   TFP2   TFP4		+	٥	I SPLOY	, DRUGL	بـ	. DKDKAG1	•
DROVELY   DROVELZ   CHALTI	DROVELY   DROVELZ   XDROGAP   YDROGAP   YDRO	+ + + + + + + + + + + + + + + + + + +		•	۵	ROGPO 1	POROS .	101	. DROVELX	
+ YDROGAP , ZDROGAP , CHALT1 CHALT2 , GLIMIT , TDELAY AREADC , WGHTDC , TFP1  - TFP2 , TFP3 , TFP3 , TPP6  - TFP3 , TFP3 , TFP4  CDDC , NPTSRDT , RECOVDT(2,25)  ***COMMON BLOCK ***COMMON BLOCK ***COMMON RKUITA / TIME , TIME5 , DELTAT , TRAJCH(97,3) , TRAJCH(97,	+ YDROGAP . ZDROGAP . CHALT1 CHALT2 . GLIMIT . TDELAY AREADC . WGHTDC . TFP1 - TFP3 . TFP3 . TDROGLS CDDC . NPTSRDT . RECOVDT(2.25) INTEGRATION ROUTINE COMMON BLOCK COMMON /RKUTTA / TIME . TIME5 . DELTAT . TRAJSO(193) . TVCEOS(225) . QUATTSO(65) . QUATTSO(65) . QUATTSO(65) . DOUATSO(65) . DOUATS	+ YDROGAP		+	٥	ROVELY	DROVE.	:12	, XDROGAP	
### CHALT2 GLIMIT TDELAY  AREADC WGHTDC TFP1  TFP2 TFP3 TDROGLS  CDDC NPTSROT RECOVDT(2.25)  INTEGRATION ROUTINE COMMON BLOCK  ***COMMON /RKUTTA / TIME DELTAT TRAJS(193) TRAJOA(193) TRAJCH(97.3) TRAJC	### CHALT2 GLIMIT TDELAY ####################################	### CHALT2 GLIMIT   TDELAY  ###################################		•	>	DROGAP	ZDROG	AP	CHALT1	
### AREADC   WGHTDC   TFP1  TFP2   TFP3   TDRGLS   TDRGLS	### ### ##############################	### TFP2		•		HAL TO	181	_	Thetay	
TFP2   TFP3   TFP3   TFP3	TFP2	TFP3			•					•
TFP2	TFP2	TFP2		•	•	ME AUC	1 401	2		•
CDDC	CODC	CDDC		+		FP2	. 15.03		. IDROGLS	-
INTEGRATION ROUTINE COMMON BLOCK	NTEGRATION ROUTINE COMMON BLOCK   COMMON /RKUTA / TIME , TIMES , DELTAT   TRAJG(193)   TRAJG(1	INTEGRATION ROUTINE COMMON BLOCK		•	Ö	<b>DD</b> C	NPTSE	201	. RECOVDT (2,2	5)
INTEGRATION ROUTINE COMMON BLOCK   COMMON / RECORD   TIMES   DELTAT   TRAJSC(193)   TRAJCA (193)   TRAJCA	INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTTA / TIME , TIMES , DELTAT , TRAJSO(193) , TRAJOA(193) , TRAJOA ,	INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTTA / TIME   TIMES   DELTAT   TRAJSO(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJCH(97.3)   TRAJCH		***********	********	********	:	******	**********	****
COMMON /RKUITA / TIME , TIMES , DELTAT . TRAJCS(193) . TRAJCA(193) . TRA	COMMON / RKUITA / TIME : TIME 5 DELTAT   TRAJCS(193)   TRAJCA(193)   TRAJCA(193)   TRAJCA(193)   TRAJCA(193)   TRAJCA(193)   TVCGS(225)   QUATSC(65)   QUATAC(65)   QUATAC(65)	COMMON / RKUITA / TIME   TIMES   DELTAT   TRAJCS(193)    + TRAJCS(193)   TRAJCA(193)   TRAJCH(97,3)    + TRAJCS(193)   TRAJCH(97,3)    + TRAJCS(193)   TRAJCH(97,3)    + TRAJCS(193)   TRAJCH(97,3)    + TRAJCS(193)   TRAJCH(97,3)    - TRAJCH(97,3)   TRAJCH(97,3)    - TRAJCH(97,3)   TRAJCH(97,3)    - TRAJCH(97,3)   TRAJCH(97,3)    - TRAJCH(97,3)   TYCH   TYCH    - TYCH   TYCH    - TYCH   TYCH    - TYC		NTEGRATION RO		MON BLOCK				•
COMMON /RKUTTA / TIME , TIMES , DELTAT   TRAUSA(193)   TRAUDA(193)   TRAUDA(193)   TRAUDA(193)   TVCEQS(225)   TAUDAS(65)   TVCEQS(225)   TAUDAS(65)   TVCEQS(225)   TVCEQ	COMMON /RKUTTA / TIME , TIMES , DELTAT    H	COMMON /RKUTTA / TIME , TIMES DELTAT   TRAJOS(193)   TRAJOS(193)   TRAJOS(193)   TRAJOS(225)   TRAJOS(2193)   TVCEOS(225)   TAJOS(2193)   TVCEOS(225)   TVCE		***********	*********	********		*	***********	****
+ 1	TRAUSA(193)   TRAUDA(193)   TRAUDA(193)   TRAUDA(193)   TVCEQS(225)   TNTST	TRAJSA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TVCEOS(225)   TNTSTP   TPCPASS   TVCEOS(225)   TNTSTP   TPCPASS   TVCEOS(225)   TNTSTP   TVCEOS(225)   TCCEOS(225)   TCCEOS(22		COMMON / DE	`				TRA.(50(193)	
+ + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + +		, Mariana				. (60)	TDA.JCM(07.3)	•
HANAC(193)   TOCEUS(229)	+ OUATSA(65) . (VCEUS(225) . (VCEUS(225) . (VCEUS(225) . (VCEUS(65) .	HADAC(193)   IVCEUS(222)		•	- •	1001 1001 10			10.00000	•
+ OUATSA(65) . QUATDA(65) .  + INTSTP . IPCPASS .  + IPCNIX . IVIX .  + IVIX . IVIX .  + IVIX . IVIX .  + IVPRIX . IPPRIX .	+ OUATSA(65) . QUATDA(65) . + INTSTP . IPCPASS . + IPOINTS . IVX . IVIX . + IVX . IVIX . IVIX . + IVIX . IVIX . IVIX . + IVIX . IVPRIX . + ICVIX . ICVIX . - ICVIX . ICVIX	+ OUATSA(65) QUATDA(65) , + INTSTP   IPCPASS   + IRX   IVX   IVX   + IXX   IVIX   IVIX   + IVIX   IVIX   IVIX   + IVIX   IVIX   IVIX   + IVPRIX   IPVIX   + ICVIX   ICVIX   ICVIX   - ICVIX   - ICVIX   - ICVIX   - ICVIX   - ICVIX   - ICVI		•	_	KAJAC( 193)	. IVCEQS	•	QUA   SU(65)	•
+ INTSTP . IPCPASS + IPOINTS . IYX + IXX . IKSUMX + IVIX . IVIIX + IVIX . IPPIX + IVPRIZX . IPVIX + ICVIX .	+ INTSTP : IPCPASS	+ INTSTP IPCPASS   IYX		+	5	WATSA(65)	OUATOA	-	OUATAC(65)	•
+ IPDINTS : IVX + IKX INSUMX + IVIX : IVIX + IVI3X IPPRIX + IVPRI2X : IPVIX + ICVIX : ICVIX	+ IPDINTS . IVX + IKX . IKSUMX IVIX . IVIIX + IVIIX . IVIIX + IVPRIZX . IPPIX + ICVIIX . ICVIIX .	+ IPDINTS IVX + IKX IKSUMX + IVIX IVIX + IVPRIX + IPPRIX + ICVIX ICVIX + ICVIX ICVIX		•	=	NISTP	IPCPAS	S.	IRKPASS	
+ IKX IKSUMX + IVIX IVIX + IVIX IVIX + IVPRIX + IVPRIX IPVIX + ICVIX ICVIIX	+ IKX IKSUMX + IVIX IVIX IVIX + IVIX IVIX + IVIX IVPRIX + ICVIX ICVIX + ICVIX ICVIX	+ IKX IKSUMX + IVIX IVIX + IVIX IVIX + IVPRIX + ICVIX ICVIX - ICVIX		•		POINTS	IVX	•	IYPRX	
+	+ 1V13	+ 171X 1711X 171X			-	, , , , , , , , , , , , , , , , , , ,	IKSIIMX	•	TKPASSX	•
+ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	+				*	2000	•	1	•
+ IVENIX IPVIX . ICVIX	+ IYPRIZX , IPVIX , IPVIX , ICVIX , IC	+ ITPRIX IPPIX . IPVIX . IPVIX			- •	· ·	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	•	× × × × × × × × × × × × × × × × × × ×	•
+ IYPRIZX , IPVIX , I	+ IVPRIZX , IPVIX , I + ICVIX , ICVIIX , I - IF(IEVENIS(24) NF 0) GDIO 500	+ IYPRI2X , IPVIX , I + ICVIX , ICVIIX , I IF(IEVENIS(24) NE. O) G0TO 500		•	-	45 L	Y LALLY	•	ITERITY	
+ ICVIX . ICVIIX .	+ ICVIIX . ICVIIX . ICVIIX . IEVIIX	+ ICVI1X , ICVI1X , ICVI1X , ICVI1X , IF(IEVENTS(24) NE. 0) GDT0 500		•	-	YPR12X	. IPVIX	•	IPYIIX	
	1F(1FVFNTS(24)	1F(IEVENTS(24)		•	Ĩ	CVIX	CVIIX	•	IREIN	
	1F(IEVENIS(24)	1F(IEVENTS(24)	U							
			,	TENERAL C		20100 10	~			
	•		,							

```
PAGE
83/11/07 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C COMPUTE CURRENT TOTAL VELOCITY

C. COMPUTE CURREN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C COMPUTE FORCES DUE TO LARGE CHUIE
                                                                                                                                                                                                                                                                                                    C CHECK FOR LARGE DROGUE CHUTE FULL INFLATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TVEL = SQRT(TRAJSO(14)+TRAJSO(14)+TRAJSO(15)+TRAJSO(15)+
TRAJSO(16)+TRAJSO(16))
                                                                                             CALL PCHUTFT(TVEL, DROGPD2, DRDRAG2, PØRUSD2, TFP2) 140 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF(TIMES .LT. (TIMES(22) + TFP2)) GDTO 300 IEVENTS(23) = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(IEVENIS(20) .NE. 0) GDID 200
IF(INISTP .EQ. 0) GDID 300
IF(INIES .LT. (TIMES(19) +TFP1)) GDID 200
IEVENIS(20) * 1
IMES(20) * TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF(IEVENTS(23) .Eq. 0) GOTO 225
IF(IMVDC .NE. 1) GOTO 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF(TVEL .LE. VELCON) GOTO 300
IMVDC = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(INTSTP .EQ. 1) G010 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALL CHUTFM(1,DROGPD1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALL CHUTFM(2, DROGPD2)
       0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TIMES(23) * TIME
       74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G010 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        G010 350
                                                                                                                                                                                                         G010 500
                                                                                                                                                                                                                                                                                                                                                                                                                                             150 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GDT0 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          225 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350 CONTINUE
          SUBROUTINE DROGUE2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          225
                                                                                                                                                                                                                                                 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195
```

7.4

```
C COMPUTE POSITION OF LARGE DROGUE CHUTE

CHARACTER CONTRACTOR CON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R = SQRT(TRAJSQ(14)+TRAJSQ(15) + TRAJSQ(15)+TRAJSQ(15)+TRAJSQ(16)+TRAJSQ(16))
1F(R : EQ. O.O) GOTO 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XDIS = -SIGN((DROGLL+COS2+COS(BETA)),TRAJSO(14))
YDIS = -SIGN((DROGLL+COS2+SIN(BETA)),TRAJSO(15))
ZDIS = -SIGN((OROGLL+SIN2),TRAJSO(16))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALL ROTATE(XYZ(1),XYZ(1),ZVECT(1),DCMSE,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIN2 = TRAJSO(16)/R
COS2 = COS(ASIN(SIN2))
BETA = ZARCTAN(TRAJSO(15),TRAJSO(14))
                                                                                                                                                                                                                                                                                                                                                                                                                                       XYZ(1) = XSSOCH(1)
XYZ(2) = YSSOCH(1)
XYZ(3) = ZSSOCH(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ပ
230
                                                                                                                                                                                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      250
```

260

CONT INUE

8

Ü

255

WRITE(5.410)
410 FORMAT(2x,//72(1H+)/,4x,"FATAL ERROR(SUBROUTINE DROGUE3)\*\*\*
+ "R EQUAL TO ZERO RESULTS IN DIVISION BY ZERO",/,72(1H+))
IERRFLG = 1

500 CONTINUE RETURN END

285

Ç

TRAJCH(2.1) = XYZ(1) + XDIS + TRAJSO(2)
TRAJCH(3.1) = XYZ(2) + YDIS + TRAJSO(3)
TRAJCH(4.1) = XYZ(3) + ZDIS + TRAJSO(4)
GDIO 500

ပ

C DESCRIPTION - LEYEL 2  C DISCRIPTION - LEYEL 2  C DUALLED NY - SOUVES THE EQUATIONS THAT COMPUTE THE DYNAMI  C C MALLED BY - C C CALLS;  C C CALLS;  C C CALLS;  C C CALLS;  C C CONSTANTS COMMON VARIABLES DEFINED: C TO BE DEFINED C TO BE	COMMUNICATIONS THAT COMPUTE THE DYNAMIC C.G.  FULLE BY  CALLED BY  CALLED BY  CALLED BY  CALLED BY  COMMUNICATIONS  COMUNICATI									
COMMON / ISEATOR   LEVEL 2  COMMON / ISEATOR   LEVEL 2  COMMON / ISEATOR   LEVEL 2  COMMON / ISEATOR   LEVEL 3  COMMON / ISEATOR   LEVER 3  COMMON / ISEATOR   LEVEL 3  COMMON / ISEATOR   LEVEL 3  CO	C ENWITTON - LEVEL 2  C MITTAD - ROTATE RUNGE  C COMMUNITATIONS  C	-	SUBROUTINE DYN							
C FUNCTION - SULVEE 2  C FUNCTION - SURVE THE COLATIONS THAT COMPUTE THE DYNAMIC C G. MACKERNT C C. MACHINICATIONS  C CALLED BY  C CALLED BY  C CALLED BY  C CALLED BY  C COMMINICATIONS  C CONSTANTS COMMON VARIABLES DEFINED: C COMMON / DONNIN / GRAVITY RADDEG  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 15 COMMON BLOCK  C COMMON / DYNCGUP / COLATION   STATE   ST	C FUNCTION - SULVEE 2  C FUNCTION - SURVE THE COLATIONS THAT CONPUTE THE DYNAMIC C G. MOYERENT C COMMUNICATIONS  C CONTINUAL READER CANDITIONS  C CONTINUAL READER CANDITIONS  C CONSTANTS COMMON VARIABLES DEFINED  C COMMON / CONSTANT / GRAVITY - RADDEG - DEGRAD - PI			:	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	*******	**********		
C FUNCTION - SQUEENTHE EQUATIONS THAT COMPUTE THE DYNAMIC C.G. O. METHOD - ROTATE, RUNGE C COMMUNICATIONS C CALLS C CONSTATT ONS C CONSTATT COMMON VARIABLES DEFINED C COMMON VARIABLES DEFINED C COMMON VARIABLES DEFINED C COMMON O'NOGIN / DOWG C C SECTION C COMMON BLOCK C COMMON O'NOGIN / DOWG C C SECTION C COMMON BLOCK C C SECTION C C COMMON BLOCK C C SECTION C C C C C C C C C C C C C C C C C C C	C FUNCTION - SQUEENTE RUNGE C COMMUNICATIONS C COMMINICATIONS C COMMUNICATIONS C COMMUNICAT		C DESCRIPTION - LEVE					•		
COMMUNICATIONS  COMMUNICATIONS  CONTENTIAL ERROR CONDITIONS:  CONSTANTS COMMON VARIABLES DEFINED:  COMON VARIABLES DEFINED:  COMMON VARIABLES DEFINED:  COMMON VARIABLES DEFINED:  COMO	COMMUNICATIONS  CALLE DE SEETINED  CONTENTIAL ERRORS CONDITIONS: CONSTANTS COMMON BLOCK COMMON / DONSTANT / GRAUTY RADDEG COEGRAD COMMON / COMMON BLOCK COMMON / ISEATOR / PONSTANT RADDEG COEGRAD COMMON / ISE		C FUNCTION - SOLV	FS THE EDUAT	IONS THAT	COMPLITE	THE DYNA!	MIC C.G. •		
COMMON VISETE, RUNGE  C COMMON VISETALLS  C COMMON COMMO	COMMUNICATIONS   CALLS	ď	SACAN C	TRENT				•	_	
C COMMUNICATIONS  C CALLS  C CONTONIVARIABLES DEFINED:  C CONTONIVALIC ERROR CONDITIONS:  C TO BE DEFINED  C TO BE DEFINED  C CONTONIVALIC ERROR CONDITIONS:  C C CONTONIVALIC COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG . DECRAD PI  C SECTION 13 COMMON BLOCK  C C COMMON / CONTONIVAL / STANT	C COMMUNICATIONS  C CALLED BY:  C CALLS  C CONTON VARIABLES DEFINED  C TO BE DEFINED  C TO BE DEFINED  C TO BE DEFINED  C COMMON VONSTAN / GRAVITY . RADDEG  C CONMON VONSTAN / GRAVITY . RADDEG  C COMMON VICONTR / FSITAT . ISTOP . ESTOP . IRESTAT. IUNITS.  C COMMON VICONTR / FSITAT . ISTOP . ESTOP . IRESTAT. IUNITS.  C COMMON VICONTR / FSITAT . ISTOP . ESTOP . IRESTAT. IUNITS.  C COMMON VISCATOR / FORMIT . RADGE . IPHASE3 . IPHASE3 . IPHASE3 . IPHASE3 . IPHASE3 . INTSO . IXXOA .	•	ATHON - DOTA	TE DIME						
CALLS:  CALLS:	CALLES  CALLS:  CALLS:			1						
CONTENT OF DEFINED:  C CALLS:  C CALLS:  C CALLS:  C CALLS:  C CALLS:  C CALLS:  C CONSTANTS COMMON VARIABLES DEFINED:  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COMMON / DYNCGIN / IDYNCG WY  C COMMON / DYNCGIN / IDYNCG WY  C COMMON / CONSTANT / GRAVITY RADDEG . DEGRAD PI  C SECTION 3 COMMON BLOCK  C C COMMON / DYNCGIN / IDYNCG WY  C COMMON / CONSTANT / SAN	CONTEND BY:  C CALLS:  C CONTON VARIABLES DEFINED:  C CONTON CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C CONMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C CONMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C CONMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C CONMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C CONMON / DYNGGIN / IDYNGG . WY . WYY  C COMMON / DYNGGIN / IDYNGG . WY . WYY  C COMMON / DYNGGIN / IDYNGG . WY . WYY  C COMMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C COMMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C COMMON / CONSTANT / GRAVITY . RADDEG . DEGRAD . PI  C COMMON / CONSTANT / GRAVITY . RADDEG . DEGRAD		C COMMONICALIONS					•		
C CALLS;  TO BE DEFINED:  C TO BE OFF NED:  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C COMMON / DYNGGIN / IDPNGG WY  C SECTION 13 COMMON BLOCK  C COMMON / DYNGGIN / IDPNGG WY  C SECTION COMMON BLOCK  C COMMON / ICONTRL / TSTAT / 1510P ESTOP IRESTRI. IUNITS  C SECTION 6 COMMON BLOCK  C COMMON / ISFATOR / IPHASE 2 IPHASE 3 IPHASE 3  INFGR ESTOP INSTANCE OF	C CALLS: TO BE DETINED C MON-COMMON VARIABLES DEFINED: C CONSTAITS COMMON VARIABLES DEFINED: C CONSTAITS COMMON BLOCK C CONSTAITS COMMON BLOCK C CONMON / CONSTAIT / GRAVITY RADDEG GGRAD PI C COMMON / DYNGGIN / IDNGG WY WY C COMMON / DYNGGIN / IDNGG WY C COMMON / DYNGGIN / IDNGG WY C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 1 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ICONTRI / FSITRT 1510P ESTOP 1RESTRI 1UNITS C SECTION 6 COMMON BLOCK C COMMON / ISERATOC / IPCNIL   KGGSO 17750		C CALLED BY:					•		
COMMON VARIABLES DEFINED:  C TO BE DEFINED:  C TO BE DEFINED:  C TO BE DEFINED:  C CONSTANTS COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI  C COMMON / OVNCGIN / IDYNCG WY  C C SECTION 1 COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C C SECTION 7 CCGG NET ON 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	COMMON VORGELS DEFINED:  C TO BE DEFINED:  C TO BE DEFINED:  C TO BE DEFINED:  C TO BE DEFINED:  C CONSTANTS COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI  C COMMON / OVNGEIN / IDVNCG WY  C C COMMON / OVNGEIN / IDVNCG WY  C C C COMMON / ICONTR L / TSTART ISOSE PIPLOT INBIFICE, IPHASE IPHASE PIPLOT INBIFICE, IPHASE PIPLOT INSON BLOCK  C SECTION 6 COMMON LICONTR L / TSTART ISOSE PIPLOT INSON INVSO INVS		C GESS					•		
TO BE DEFINED	TO BE DEFINED	ç	CALLS					•		
CONSTANTS COMMON VARABLES DEFINED:  C TO BE DEFINED  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI  C COMMON / DVNCGIN / DVNCG WY  C COMMON / DVNCGIN / DVNCG SZNA SZNA  C COMMON / DVNCGNE C COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C C SECTION 7 COMMON BLOCK  C C SECTION 7 COMMON BLOCK  C C SECTION 7 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C C SECTION 7 COMMON BLOCK  C SECTION 8	C TO BE DEFINED  C POTENTIAL READS CONDITIONS: C TO BE DEFINED  C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI  C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD PI  C COMMON / CONTAILES COMMON BLOCK C COMMON / LCONTR / TSTAT ISTOP ESTOP INRESTRI IUNITS IPART INVO INVO INVO INVO INVO INVO INVO INVO	,	E CI	IE DEFINED				•		
C CONSTANTS COMMON BLOCK C CONMON / CONSTANT / GRAVITY RADDEG . DEGRAD . PI C SECTION 13 COMMON BLOCK C COMMON / DYNCGIN / DDNCG WY WYY SXN	C CONSTANTS COMMON BLOCK C CONMON / CONSTANT / GRAVITY RADDEG . DEGRAD . PI C COMMON / VONCGEIN / IDPNCG WY WYWY SYN SYN SYN SYN SYN SYN SYN SYN SYN SY									
C TO BE DEFINED C TO BE DEFINED C TO BE DEFINED C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVITY RADDEG DEGRAD C SECTION 13 COMMON BLOCK C COMMON / VINCEIN / IDVNCG WY SYP SXN CY SYP CY SYP CY SYP COMMON PLOCK C COMMON / VINCEIN / IDVNCG WY CY SYP CY SYP CY SYP CY SYP COMMON PLOCK C COMMON / VINCEIN / IDVNCG WY CYCGAD O	C TO BE DEFINED C TO BE DEFINED C TO BE DEFINED C CONSTANT & RADOR C CONSTANTS COMMON BLOCK C COMMON / DYNCGIN / IDNNCG WY C COMMON / DYNCGIN / COMMON BLOCK C COMMON / ICONTR / STAPT   ISTOP   ESTOP   IRRESIRT   IUNITS   C SECTION   COMMON BLOCK C COMMON / ISEATOR   FORM   INSTEAD   INSTEAD   C SECTION   COMMON BLOCK C COMMON / ISEATOR   ISOSEP   IPLOT   IDRIFIC   C SECTION   COMMON BLOCK C COMMON / ISEATOR   INSTANT   INSTANT   INSTANT   C SECTION   COMMON BLOCK C C SECTION   COMMON BLOCK C C COMMON / ISEATOR   INSTANT   INSTANT   INSTANT   C SECTION   COMMON BLOCK C C SECTION   COMMON BLOCK C C COMMON / ISEATOR   INSTANT   INSTANT   INSTANT   C SECTION   COMMON BLOCK C C SECTION   COMMON BLOC		C NON-COMMON VAKIABL	ES DEL INEU:				•		
C TO BE DEFINED  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C DYAMMIC CG VARIABLES COMMON BLOCK  C COMMON /DYNGGIN / TSTART 1510P ESTOP 18ESTR1 1UNITS 15EATR 150SEP 1PLOT 1DRIFLG.  C SECTION 1 COMMON BLOCK  C COMMON /LCONTRL / TSTART 1510P ESTOP 1RESTR1 1UNITS 15EATR 150SEP 1PLOT 1DRIFLG.  THATEGRA ESTOP 1720A WCHITABL WITCHAA 1Y20A	C TO BE DEFINED  C CONTAINTS COMMON BLOCK  C CONHAIN / CONSTINT / GRA1IT		C TO BE DEFINED					•		
C CONSTANTS COMMON BLOCK C COMMON /CONSTNT / GRAVITY RADDEG . DEGRAD . PI C COMMON /CONSTNT / GRAVITY RADDEG . DEGRAD . PI C SECTION 13 COMMON BLOCK C SECTION 13 COMMON BLOCK C C SECTION /OYNGGIN / IDPNGG . WY C XSLACK SXP SXN C XSLACK C XSLACK SXN C XSLACK SXN C XSLACK C XSLAC	C CONSTANTS COMMON BLOCK C COMMON /CONSTNT / GRAVITY RADDEG DEGRAD PI C COMMON /CONSTNT / GRAVITY RADDEG DEGRAD PI C SECTION 13 COMMON BLOCK C SECTION / DYNGGIN / IDYNGG WY XYY C COMMON /DYNGGIN / IDYNGG WY XYY C COMMON /ISETION / IDYNGG WY XYY C COMMON /ISETIOC / IPCNTL XCGSO YCGSO ZCGSO IXXSO IXXS		C POTENTIAL ERROR CO	NOTITIONS				•		
C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON /DVNGGUB / GGVAL(6) CGDERV(8) . ZSLACK  C COMMON /DVNGGUB / GGVAL(6) CGDERV(8) . ZSCAO  C C SECTION 1 COMMON BLOCK  C COMMON /DVNGGUB / GGVAL(6) CGDERV(8) . ZCGAO  C C SECTION 1 COMMON BLOCK  C C COMMON /LCONTRL / STLART   ISTOP   ESTOP   IRRESIRT   IUNITS    C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 8 COMMON BL	COMMON / CONSTNT / GRAVITY RADDEG DEGRAD PI  COMMON / DYNGGIN / IDYNGG WY COMMON / DYNGGIN / COMMON BLOCK COMMON / CONTRIBLES COMMON BLOCK COMMON / ICONTRI / TSTART ISTOP ESTOP IRESTRY IUNITS ISSECTION COMMON BLOCK COMMON / ICONTRI / TSTART ISTOP ESTOP INTEGRA COMMON / ISEATOR   PHASE 2   PHASE 3   IPRIST INTEGRA COMMON / ISEATOR   FOUNT   XCGSO   XCGS		o to the transport	200						
C CONSTANTS COMMON BLOCK  C COMMON /CONSTANT / GRAVITY RADDEG . DEGRAD . PI  C SECTION 13 COMMON BLOCK  C DYNAMIC CG VARIABLES COMMON BLOCK  C SECTION 1 COMMON VICONTRL / TSTART 1570P . ESTOP . IRESTRT. 1UNITS.  COMMON /ICONTRL / TSTART 1570P . ESTOP . IRESTRT. 1UNITS.  COMMON /ICONTRL / TSTART 1570P . ESTOP . IRESTRT. 1UNITS.  COMMON /ICONTRL / TSTART 1570P . ESTOP . IRESTRT. 1UNITS.  COMMON /ICONTRL / TSTART 1570P . ESTOP . IRESTRT. 1UNITS.  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON INSERTION 1 TYPOR 1 TYPO	C CONSTANTS COMMON BLOCK  C COMMON /CONSTNT / GRAVITY RADDEG . DEGRAD . PI  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 14 COMMON BLOCK  C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON /DYNCGNE / CGARL (6) . CGDERV(8) .  C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON /DYNCGNE / CGARL (6) . CGDERV(8) .  C DYNAMIC CG VARIABLES COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON 12 EATOC / IPCNIL . XCGSO	ດ	C 10 BE DEFINED							
C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C DYMAIC CG VAR ABLES COMMON BLOCK  C DYNAMIC CG VAR ABLES COMMON BLOCK  C SECTION 1 COMMON LICONTRL / TSTART 1510P ESTOP 1RESTRI 1UNITS 1 SEATOM 1 COMMON / 156 ATTR, 155 CG 1 PHASE 2 1 PHASE 2 1 PHASE 3 1 PHASE	C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C DYMAIL CG VAR ABLES COMMON BLOCK  C DYNAMIC CG VAR ABLES COMMON BLOCK  C DYNAMIC CG VAR ABLES COMMON BLOCK  C COMMON /ICONTRL / TSTART 1570P ESTOP 1RESIRT 1UNITS 158 178 150 ESTOP 17250 12250  C SECTION 6 COMMON BLOCK  C COMMON /ISEATOC / 1PCNTL XCGSO YCGSO 17250 12250  C SECTION 6 COMMON BLOCK  C COMMON /ISEATOC / 1PCNTL XCGSO YCGSO 17250 12250  C SECTION 6 COMMON BLOCK  C COMMON /ISEATOC / 1PCNTL XCGSO YCGSO 17250 12250  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 1 SEATOR 1720A		• • • • • • • • • • • • • • • • •	•••••	*****	• • • • • • • •		:		
C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON BLOCK  C SECTION 13 COMMON BLOCK  C COMMON / DYNGGIN / 1DYNGG WY  C SECTION 13 COMMON BLOCK  C DYNAMIC CG VARIABLES COMMON BLOCK  C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON / DYNGGW / GGVAL(6) , CGGDEN(6) , CGGDAO  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION / CONTRL / TSTART   1510P   ESTOP   IRESTRT   1UNITS   1541PR   1541PR   100FR	C CONSTANTS COMMON BLOCK  C SECTION 13 COMMON PLOCK  C SECTION 13 COMMON BLOCK  C COMMON / DYNCGN / 1DYNCG WY C Z ZSLACK  C COMMON / DYNCGW / CCAACK   SXN   CX Z ZSLACK  C COMMON / DYNCGW / CCAACK   SXN   CX ZSLACK  C COMMON / DYNCGW / CCAACK   CX ZSLACK  C COMMON / DYNCGW / CCAACK   CX ZSLACK  C COMMON / CONTR   751AFT   1510P   E510P   1RESTRT   1UNITS    C SECTION 1 COMMON BLOCK  C SECTION   COMMON BLOCK  C COMMON / ISEATOR   FASTE   1PHASE   1PHASE    TOWN   TX STATE   TX STATE   TX STATE    C SECTION   COMMON   SEATOR   TX STATE    C SECTION   STATE   TX STATE    C SECTION   STATE   TX STATE    C SECTION   STATE   TX STATE    C SECTION    C SECTION   STATE    C		C***************	***********	********	********	********	**********		
COMMON / CONSINI / GRAVITY RADDEG . DEGRAD . PI COMMON / DYNCGIN / IDYNCG . WY . WYY COMMON / DYNCGIN / IDYNCG . WY . SY . CZ . ZSLACK C DYNAMIC CG VARIABLES COMMON BLOCK C DYNAMIC CG VARIABLES COMMON BLOCK C DYNAMIC CG VARIABLES COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C C SECTION 6 COMMON BLOCK C C SECTION 7 COMMON BLOCK C C SECTION 6 COMMON BLOCK C C SECTION 6 COMMON BLOCK C C SECTION 7 COMMON BLOCK C C SECTION 6 COMMON BLOCK C C SECTION 6 COMMON BLOCK C C SECTION 7 COMMON BLOCK C SECTION 7 C	C SECTION 13 COMMON MINCG WY COMMON DELOCK  C SECTION 13 COMMON BLOCK  C DYNAMIC CG VAR ABLES COMMON BLOCK  C DYNAMIC CG VAR ABLES COMMON BLOCK  C C DYNAMIC CG VAR ABLES COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C SECTION 1 COMMON BLOCK  C C C C C C C C C C C C C C C C C C		B CONSTANTS COMMON B	NOCK I					•	
COMMON /CONSTNT / GRAVITY . RADDEG . DEGRAD PI C SECTION 13 COMMON BLOCK C COMMON /DVNCGN / 1DYNCG WY	C SECTION 13 COMMON BLOCK  C C COMMON / DYNGG WY  C W XSLACK SAP SAN  C WY  C SECTION 1 COMMON BLOCK  C C COMMON / ISEATOC / IPCNIL SCOOL  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON WELCK  C SECTION 1 SEATOC / IPCNIL XCGSO YCGSO 1 IVSO 1 IVS				****	444444		•	•	
COMMON / CONSTAT / GRAVITY RADDEG DEGRAD PI  C SECTION 13 COMMON BLOCK  C COMMON / DVNCGIN / IDVNCG WY WY SXN  C Y SY SXN  C C SECTION COMMON BLOCK  C COMMON / DVNCGUB C COMMON BLOCK  C SECTION 1 COMMON SEATOR   INTSO	C SECTION 13 COMMON   CONSTANTY   CRAVITY   RADDEG   DEGRAD   PI    C SECTION 13 COMMON BLOCK   CZ   SXN   SXN    C SY   SXN   SXN   SXN    C SY   SXN   SXN    C SY   SXN   SXN    C DYNAMIC CG VARIABLES COMMON BLOCK   CGGROUG    C COMMON   DYNCGUB   CGCAL(6)   CGGROUG    C SECTION   COMMON BLOCK    C SECTION   COMMON   SEATH   START   START   START    COMMON   SEATH   START   START   START    C SECTION   COMMON   SEATH   START   START    C SECTION   SCOMMON   SEATH   START    C SECTION   SCOMMON   SEATH   START    C SECTION   SCOMMON   SEATH   START    C SECTION   SCOMMON   START    C SECTION   START   START    C SECTION   START   START    C SECTION   START   START    C SECTION    C SECTIO		•••••	• • • • • • • • • • • •				<b>,</b>	•	
C SECTION 13 COMMON BLOCK  C	C SECTION 13 COMMON BLOCK  C XXLACK SXP SXN  C XXLACK SXP SXN  C XXLACK SXP SXN  C XY SY CZ SZLACK  C DYNAMIC CG VARIABLES COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 8 COMMON BLOCK  C SECTION 8 COMMON BLOCK  C SECTION 8 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 8	0	COMMON /CONSIN	IT / GRAVITY	. RADDE	. 06	GRAD	I .		
COMMON / DYNGGIN / IDYNGG WY WYY SXN CX XSLACK SXP SXN CX XSLACK SXP SXN CX XSLACK SXP SXN CX SXP SXN CX SXP SXN SXN CX SXP SXN SXN CXP SXN	COMMON / DYNGGIN / IDVNGG WY WY SXN COMMON / DYNGGIN / IDVNGG WY WY CZ ZSLACK CX SXP SXN CX SZN CX		******	*********	*******	*******	********	**********	•	
COMMON / DYNGGIN / IDYNGG WY COMMON / DYNGGIN / IDYNGG WY COMMON / DYNGGIN / IDYNGG WY COMMON / DYNGGIN / SYD CZ ZSLACK SYD CZ ZZLACK SYD	COMMON / DYNGGIN / IDYNCG WY		MONTHOU CT NOTIONS	70010					•	
COMMON / DYNGGIN / IDYNGG WY	COMMON / DYNGGIN / IDYNGG WY SXN		NOWWON IS COMMON	BLUCK						
COMMON DVNCGIN / IDYNCG WY WYY SYLOCK  CY SYLOCX SZNACK  SZP ZBOT SZN1 SZN2  C DYAMJC CG VARIABLES COMMON BLOCK  C COMMON DYNCGVB / CGVAL(6) CGDERV(6).  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 SEATOR 1 TYSO 1	COMMON DOYNGGIN / IDYNGG WY WYY  **STACK SZNACK  CY SYLCZ SZNACK  SZP ZBOT SZN1 SZNZ  C DYAMIC CG VARIABLES COMMON BLOCK  C COMMON / DYNCGVB / CGVAL(6) . CGCBAV(6) .  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON ISEATOC   IVX50   IVX50   IVX50    C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 5 COMMON BLOCK  C SECTION 7 COMMON RICKS 7 COMMON 7 COMM		*****************	*********	*******	****	*******	**********	•	
C SECTION COMMON SLOCK  C SECTION I COMMON SLOCK  C SECTION I COMMON BLOCK  C COMMON / ISEATOR   ISTOP   ISTOP   ISTOP   ITXSO   ITXSO	C C SECTION   SE		INCANO, NOMBOO	N / TOYNCE	> 3	<b>*</b>				
CY SY CZ SZACK SZAZKY CZ SZAZKY SZAZK	CY SY CZZ ZSLACK : STACK : SZLACK : SZNZ : S	ŧ					47.5			
C DYNAMIC CG VARIABLES COMMON BLOCK C COMMON /DVNCGVB / CGVAL(6) , CGGERV(8). C COMMON /DVNCGVB / CGVAL(6) , CGGERV(8). C COMMON /DVNCGVB / CGVAL(6) , CGGERV(8). C C SECTION 1 COMMON BLOCK C C SECTION 1 COMMON BLOCK C C C C C C C C C C C C C C C C C C C	C COMMON / JONGANB LOCK  C COMMON / JONGANB / GGAL(6) , GGDERV(6)	,	•	· 3	AJERCA.		247			
C COMMON / DVNCGVB / CGVAL(6) , CGDERV(6) , CCDMMON / DVNCGVB / CGVAL(6) , CGDERV(6) , CCDMMON / DVNCGVB / CGVAL(6) , CGDERV(6) , CC SECTION 1 COMMON BLOCK C COMMON / ICONTRL / TSTART , TSTOP , ESTOP , TRESTRT , TUNITS , THASE1 , TPHASE2 , TPHASE3    THASE1 , TPHASE2 , TPHASE3    C SECTION 6 COMMON BLOCK C COMMON / ISEATOC / TPCNTL , CGSO , VCGSO , TYSO , TXSO    TXTSO , TXTSO , TXTSO , TYTSO , TYTSO , TYTSO , TXTSO , TXTSO , TYTSO ,	C C SECTION / COMMON / ISEATOC / INVOICE REAL		+	٠,	۲.	, zo	ZSLACK			
C COMMON / DYNCGVB / CGVAL(6) , CGDERV(6).  C COMMON / DYNCGVB / CGVAL(6) , CGDERV(6).  C COMMON / LCONTR / TSTART TSTOP , ESTOP TRESTRT TUNITS .  TOMMON / LCONTR / TSTART TSTOP , ESTOP TRESTRT TUNITS .  TOMMON / LCONTR / TSTART TSTOP , ESTOP TRESTRT TUNITS .  TOMMON / LCONTR / TSTART TSTOP , ESTOP TRESTRT TOWNS COMMON / TSTART TSTOP , ESTOP TRESTR TOWNS COMMON / TSTART TSTOP , ESTOP TWYSO , TYSO , TYSO .  C SECTION 6 COMMON BLOCK  C SECTION 8 COMMON BLOCK	C DYMAIC CG VARIABLES COMMON BLOCK  C COMMON / DYNCGVB / CGVAL(6) , CGDERV(8).  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON SEATOR 1 STAPE 1 PHASE 3  INTEGER ESTOP  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 STAPE 1		•		2B0T	SZN1	SZN2			
C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON / DYNCGVB / CGVAL(6) , CGDERV(8).  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C C C COMMON / ISEATOC / IPCATTR 1 TSTOP ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   ESTOP   IRESTRT 1 UNITS 1 TSTOP   INTEGRAL	C DYNAMIC CG VARIABLES COMMON BLOCK  C COMMON / DYNCGVB / CGVAL(6) , CGDERV(6).  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 SEATOR 1730P ESTOP 1RESTRT 1UNITS 1840    C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON SEATOR 1 STATE		•	********	• • • • • • • • • • • • • • • • • • • •	******	:	••••		
COMMON / DYNCGWB / GGVaL(6) , CGDERV(6) .  COMMON / DYNCGWB / CGVaL(6) , CGDERV(6) .  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C C SECTION 7 COMMON STATE STOP . IRESTRT. IUNITS .  INTEGER  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON STATE STOP . INTEGER  FEAL	COMMON / DYNCGVB / GGVal(6) , CGDERV(6) .  COMMON / DYNCGVB / CGVal(6) , CGDERV(6) .  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C COMMON / ISEATOR 1 STOP ESTOP 1 RESTRT 1 UNITS .  INTEGER ESTOP 1 PHASE 2 IPHASE 3  INTEGER ESTOP 1 STOR 1 INTEGER  C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC / IPCNIL . KCGSO . YCGSO . IXXSO .  REAL IXXSO IXXSO . IXXS			I C COMMENTS D	100					
COMMON / DYNGOVB / CGVAL(6) . CGDERV(6) .  **CGDAO . YCGDAO . ZCGDAO .  **CCGDAO . YCGDAO . ZCGDAO .  **CCGDAO . YCGDAO . ZCGDAO .  **CCCCCCC DYCG . DZCG .  **CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	COMMON / DYNGGVB / CGVAL(6) , CGDERV(6).  C SECTION 1 COMMON BLOCK  C COMMON / ICONTRL / TSTART , ISTOP , ESTOP , IRESTRT , IUNITS , ISTART , ISTOP , ESTOP , IRESTRT , IUNITS , IPHASE1 , IPHASE2 , IPHASE3		Z .	TO COMMON DE	¥ .			•		
COMMON / DYNCGVB / CGVAL(6) , CGDERV(6) ,  + CGGAO , YCGDAO , ZCGAO ,  C SECTION 1 COMMON BLOCK  C SECTION / ICONTRL / TSTAP	COMMON / DYNCGVB / CGVAL(6) , CGDERV(6) ,  C SECTION 1 COMMON BLOCK  C SECTION / ICONTRL / TSTART , TSTOP , ESTOP , TRESTRT , TUNITS ,  THASE1, IDHASE2, IPHOT , IDRIFLG,  INTEGR ESTOP , TRESTRT , TUNITS ,  C SECTION 6 COMMON BLOCK  C SECTION 7 STATE	2	*							
C SECTION 1 COMMON BLOCK  C SECTION 1 COMMON BLOCK  C SECTION A COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK  C SECTION 8 COMMON BLOCK  C SECTION 8 COMMON BLOCK  C SECTION 5 COMM	C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 6 COMMON BLOCK C C COMMON / ISEATOC / IPCNIL , XCGSO , YCGSO , IXXSO , IX		COMMON /DANCOR	B / CGVAL(6)		. (9).				
C SECTION 1 COMMON BLOCK  C COMMON / ICONTRL / TSTART	C SECTION 1 COMMON BLOCK  C COMMON /ICONTRL / TSTART , ISTOP , ESTOP , IRESTRT. IUNITS , ISEATTR , ISOSEP , IPLOT , IDRIFLG, IPHASE1. IPHASE2. IPHASE3  L IPHASE1. IPHASE2. IPHASE3  L SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C C SECTION 6 COMMON BLOCK  C C SECTION 7 SEATOC / IPCNIL , XCGSO , YCGSO , IXSO , I		*	XCGDAO	, YCGDA		. 040			
C SECTION 1 COMMON BLOCK C COMMON /ICONTRL / TSTART   ISTOP   ESTOP   IRESTRT   IUNITS	C SECTION 1 COMMON BLOCK  C COMMON / ICONTRL / TSTART , TSTOP   ESTOP   TRESTRT . 1UNITS . TSPART   TSPART   TSOSEP   TPLOT   TORIFLG,   TPHASE 1   TPHASE 2   TPHASE 3   TPHASE 3   TRESTRT . 1UNITS . TSOSEP   TSPART   TSOSEP   TSOSEP   TSOSEP   TSTOSEP   T		•	DXC	DYCG	•	ď			
C SECTION 1 COMMON BLOCK  C. COMMON / ICONTRL / TSTART   TSTOP   ESTOP   TRESTRT   TUNITS    TOWNON / ICONTRL / TSTART   TSTOP   ESTOP   TRESTRT   TUNITS    C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC   FOUNTL   XCGSO   YCGSO   XCGSO   XCGSO    TXYSO   TXYSO   TXZO   TYZO   TZSO    TXYSO   TXYSO   TXZO   TYZO   TZSO    TXYSO   TXYSO   TXZO   TYZO   TYZO    TXYSO   TXYO   TYZO   TYZO   TYZO    C SECTION 5 COMMON BLOCK  C SECTION 5 COMMON BLOCK  C SECTION 5 COMMON   TXZO   TYZO   TXYZO    TXYSO   TXYSO   TXYSO   TXZO   TYZO    TXYSO   TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO   TXYSO    TXYSO    TXYSO   TXYSO    TXYSO	C SECTION 1 COMMON BLOCK  C. COMMON / ICONTRL / TSTART   TSTOP   ESTOP   IRESTRT   IUNITS    THASE1   IPHASE2   IPLOT   IDRIFLG    THASE1   IPHASE2   IPHASE3    C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC / IPCNIL   XCGSO   YCGSO   XCGSO   XCSO    TXYSO   XXYSO   XXXSO   XXYSO   XXXSO   XXXSO								•	
C SECTION 1 COMMON BLOCK  C COMMON /ICONTRL / TSTART , ISTOP , ESTOP , IRESTRT. 1UNITS , ISEATTR , ISOSEP , IPLOT , IDRIFLG,	C SECTION 1 COMMON BLOCK  C COMMON / ICONTRL   TSTOP   ESTOP   IRESTRT   IUNITS    +			· · · · · · · · · · · · · · · · · · ·						
COMMON /ICONTRL / TSTART, 15TOP , ESTOP , IRESTRT. IUNITS , 1PHASE2 , 1PHASE3	COMMON /ICONTRL / TSTART : ISTOP : ESTOP : IRESTRT : IUNITS : IPHASE2 : IPHASE3   INIEGR	r.	C SECTION 1 COMMON	BLOCK					*	
COMMON /ICONTRL / TSTART , ISTOP , ESTOP , IRESTRT. IUNITS .  +	COMMON /ICONTRL / TSTART , ISTOP , ESTOP , IRESTRT . IUNITS . ISEATTR , ISOSEP , IPLOT , IDRIFLG, IPHASE 3		C*****************	**********	*******	********	********	٠	•	
15EATTR   1505EP   1PH05E   1DRIFLG     1PHASE   1PHASE   1PHASE   1PHASE     1	FEATTR   ISOSEP   IPHOT   IDRIFLG		COMMON / ICONTR	L / TSTART	TSTOP	ESTOP	TRESTRE	IUNITS		
IPHSE1, IPHSE2, IPHASE3   1981   19	PHASE 1   PHASE 2   PHASE 3   PHASE 3			OFF 4 POP			100101			
PHASE1   IPHASE2   IPHASE3	Therefore		•	LOCALIR.	1300st	12.01	DKIT LG.			
C. SECTION 6 COMMON BLOCK C. COMMON / ISEATOC / IPCNTL , XCGSO , YCGSO , ZCGSO , IXXSO	C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC / IPCNTL , XCGSO , YCGSO , ZCGSO , IXXSO , IXYSO , IXXSO , IXXS		+	IPHASE 1.	I PHASE 2.	I PHASE 3				
C SECTION 6 COMMON BLOCK C COMMON / ISEATOC   IXYSO   IYYSO   IXXSO	C SECTION 6 COMMON BLOCK C COMMON / ISEATOC / IPCNIL , XCGSO , YCGSO , ZCGSO , IXXSO , IXXSO , IXXSO , IXXSO , IXXSO , IXXSO , IXZO , I	0	INIEGER	ESTOP						
C SECTION 6 COMMON BLOCK COMMON / ISEATOC / IPCNIL , XCGSO , YCGSO , ZCGSO , IXXSO , I	C SECTION 6 COMMON BLOCK COMMON / ISEATOC / IPCNIL		***************	*******	*******	*******	********	********	*	
COMMON / ISEATOC / IPCNTL , XCGSO , YCGSO , ZCGSO , IXXSO , IX	COMMON / ISEATOC / IPCNTL , XCGSO , YCGSO , ZCGSO , IXXSO , IXYSO , IXYSO , IXXSO , IX		NOMMON A MOLITICAL	70.0					•	
COMMON / ISEATOC / IPCNTL	COMMON / ISEATOC / IPCNTL . XCGSO , YCGSO . ZCGSO . IXXSO . IXXSO . YCSO . YCSO . IYZSO . IZZSO . YCSO . YC		C SECTION C COMMON	בייכי			:	•	. :	
COMMON / ISEATOC / IPCNIL	COMMON / ISEATOC / IPCNIL		*******	*********	********	********	********	*	•	
1	1		COMMON / ISEATO	C / IPCNTL .	xceso.	YCGSO.	zceso	. IXXSD		
AREASO AREADA WGHTOAB WGHTOAA.    XXCDA   XXCDA   XXCDA   YXCDA   YYCDA   YYCDA     XXSD   XXYSO   XYYSO   YYSO   YYSO     XXSU   XXYSO   XXYSO   XYSO   YYSO     XXSU   XXYO   XXYO   XYSO   YYSO     YYSO   XYSO   XYSO   XYSO     YYSO   XYSO   XYSO     YYSO   XYSO     YYSO   XYSO     YYSO   XYSO     YYSO   XYSO     YYSO     YYS	### ##################################	ıc	+	USAXI	1 × 2 × 0	IVVSD	17750	17750		
TXOA   TXOA   TXOA   TYOA	TXOA   TYOA		•			04071				
### FEAL   IXYOA   IXYOA   IYYOA   IYY	TXXOA   TXXOA   TXXOA   TYZOA   TYZO		•	AKEASU .	AKEAUA .	WELL UAG.	40109			
1220A	REAL IZZOA , XCGOA , YCGOA , SCGOA SOSEP  **REAL IZXSO , IXYSO , IYYSO , IYYOA , YCGSA , YCGSA , YCGSA , YCGSA , IXYSA , IXYSA , IYYSA		•	. AOXXI	IXVOA.	[XZQA	IYYOA .	. IYZOA .		
REAL   IXXSU   IXYSO   IXZSO   IYYSO   IYZSO   IYZSO   IYZSO   IYZO	FEAL   IXXSU   IXYSO   IXZSO   IYYSO   IYZSO   IXZSO		*	1220A	XCGOA .	YCGOA	ZCG0A	SOSEP		
C SECTION 5 COMMON VISETALN / YFOSSRP, ZPOSSRP, ZPOSSRP, YFOSS , YFOSA	C SECTION 5 COMMON BLOCK  C SECTION 5 COMMON BLOCK  C.**********************************		DEAL	TEXCO	1 x x c	1 X 7 C D	1770	17750		
1720A . 1770A	17204 . 17704 . 17704 . 17704 . 17704 . 17704 . 17704 . 17704 . 17204 . 17204 . 17704	,	1							
YZOA   1220A   C SECTION 5 COMMON BLOCK   C.************************************	1720A	5	•	12250	YXOA.	I AYUA	. AU2.1	. IVVOA .		
C SECTION 5 COMMON BLOCK C.***********************************	C SECTION 5 COMMON BLOCK  C SECTION 5 COMMON BLOCK  C**********************************		*	I Y 20A	1220A					
C SECTION 5 COMMON BLOCK C***********************************	C SECTION 5 COMMON BLOCK  C.**********************************		C		• • • • • • • •	*******	••••••	٠	:	
C	C		C SECTION 5 COMMON	BLOCK					•	
CDMMON /ISETALN / XPOSSRP, YPOSSRP, ZPOSSRP, XCGSA , 2CGSA , IXXSA , IXXSA , IXZSA , IXZSA , IXZSA , PHISA , PSISA	COMMON /ISETALN / XPOSSRP, YPOSSRP, ZPOSSRP, XCGSA , 2CGSA , IXXSA , IXXSA , IXZSA , + IXZSA , PHISA , PSISA .		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*********	********	********		*********	:	
+ 1725A . 1775A . 1775	+ 7CG55A . 1XXSA . 1XXSA . 1XXSA . 1XXSA . 1XZSA . 1XZSA . PSISA . PSI	4	COMMON / FEETAL	N / YOUGEDD	VDACCOD	2000000	Y C C C A			
IXXSA IXYSA IXZSA IZZSA IZZSA PHISA PSISA	IXXSA . IXYSA . IXZSA .	,	THIST / NOWHON	A Artesakr.	. TREEDY					
IZZSA PHISA PSISA	. IZZSA . PHISA . PSISA .		*	ZCGSA .	IXXSA.	IXYSA.	IXZSA .	IYYSA		
			•	IY2SA	17754	PHISA	PSISA	THESA		

IASSA		+ + REAL	 01 .	, HGHTSA , WGHTSA , XPOSSCS, YPOSSCS . IXYSA , IXZSA	·	XPOSBOT, YPOSBOT, ZPOSSCS IYYSA , IYZSA ,	
COMMON / MASSES / MASSOA   MASSOA   MASSOA    #RAL   MASSOA   MASSOA   MASSOA   MASSOA    COMMON / MATRIX / DCMAE(3.3)   DCMAS(3.3)    HEADROL   HEADROL   HEADROL    HEADROL   HEADROL   HEADROL    HEADROL    HEADROL   HEADROL    HEADRO	ပ်ပ	MASSES COMMON BLOC	**************************************				• • •
C MATRIX COMMON BLOCK  C MATRIX COMMON MATRIX / DOME(3.3) DOMS(3.3) DOMS(3.3	Ü	COMMON /MASSES + REAL	MASSOA1 MASSSA MASSOA1 MASSSA	MASSGA2 MASSRK(6) MASSGA2 MASSRK	MASSO MASSO MASSO	, MASSO	•
COMMON   MISC   TOWARE (3.3)   DOWNER (3.3)   DOWNER (3.3)	ပ်ဖပ်	MATRIX COMMON BLOC	X	c c gamba			• • •
COMMON /MISC   IPAGECT(31)   LINECT(31)   IPRICNIT(31)    + MAXENT   MAXENT   MAXENT    + MAXLINE   HEADALT   HEADALT    + HEADALT   HEADALT   HEADALT    + HEADALT   HEADALT   HEADALT    + HEADALT   HEADALT   HEADALT    + REPTYPE   PRTUMCT    + PRTUMCT    + PRTUMCT   PRTUMCT    + PRTUMCT    - NACCEL (3)   NACCEL (3)   PRTUMCT    + PRTUMCT    - NACCEL (3)   NACCEL (3)   NACCEL (3)    - NACCEL (3)   NACCEL (3)    - NACCEL (3)   NACCEL (3)    - NACCEL (3)   NACCEL (	č		DCMSE(3,3) DCMSAE(3,3) DCMSAE(3,3)	) , DCMTS(3,3) , DCMOAE(3,3)	DCMSR(3), DCMSR(	(3,3) (3,3)	:
COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRICNT(31) . TEVLINE . IERRÉED LU . LU . IERRÉED . LU . HEADORT	, u č	MISCELLANEOUS DATA	COMMON BLOCK				
### MAXENT ####################################	•	COMMON /MISC	/ IPAGECT(3		•		•
HEADALT   HEADVEL		+ +	MAXL INE	MAXREP	_ ი	MAXEVNT	•
+ HEADSR			IDATE	HEADAL	· ·	HEADVEL	•
FRANKOIT		•	HEADSR	HEADY A	·	HEADPIT	•
+ HEADER(24) IEVENTS(38), TIMES(38)  + REPTAGE   IMUDC   PRTEMP   2)  + REPTYPE   BIAS   SAVINE   SAVINE    + REPTYPE   BIAS   PRTINDX   PRTINGT    + PRTEMP   SAVINE   SAVINE    C MOMARMS COMMON   BLOCK   COMMON   MOMARMS   COMMON   COMMON   MOMARMS   COMMON   COMMON   MOMARMS   COMMON   CO		• •	DEPTYDE ( 5			BIAS DDIWG41(2)	•
+ PRIEMP( 2)		• •	THE ADER (24		5(38)		- •
+		•			•		•
+ KACCEL(3)		<b>+</b> +	7VECT (3)	•	· <u>·</u>	PRZVEL	•
PRIMGHT		•	XACCEL(3)	YACCEL	(3)	ZACCEL(3)	•
C MOMARMS COMMON BLOCK  C MOMARMS COMMON NOTION  C MOMARMS COMMON MOMARMS /  *RELNSO REFLNOA REFLNSA URX(6) , URZ(6) ,  *RSSOCA(2) , YSSOCA(2) , XSSOR(6) , YSSORR(6) , ZSSORR(6) ,  **XSSORRE YSSORRE ZSSORRE XSSORRE XSSOROT YSSOROT ZSSOROT XSSOROT		INTEGER	REPTYPE	. BIAS	•	PRTLNGT	
C MOMARMS COMMON BLOCK C	į	•	PRTEMP	PRTMAS	S	PRTINDX	
COMMON /MOMARMS / REFLNSA ,URX(6) ,URY(6) ,URZ(6) , +XSSOCA(2),YSSOCA(2),ZSSOCA(2),XSSORK(6),YSSORK(6),ZSSORK(6), +XSSORRE ,YSSORRE ,ZSSORRE ,XSSOLRE ,ZSSOLRE ,XSSOLRE ,XSSOLRE ,XSSOLRE ,XSSOLRE ,XSSORNE ,XSSORNE ,XSSOROI ,XSSOROI ,ZSSOROI ,XSSOROI ,XSSOROI ,XSSOROI ,XSSOROI ,XSSORRE ,XSSOROI ,XSSORRE ,XSSORCE ,XSSOR	ပ် ပ	MOMARMS COMMON BLO	CK				
+XSSORRE 'YSSORRE 'ZSSORRE 'XSSOLRE 'YSSOLRE 'ZSSOLRE 'XSSOURE 'XSSOSRO 'XSSOURE 'XS		COMMON /MOMARM +REFLNSO , REFL +XSSOCA(2), YSSO	S / NDA , REFLNSA CA(2), 2SSDCA(2	,URX(6)	URY(6),	URZ(6) ZSSORK(6).	
+XSSOSB(6), YSSOSB(6), ZSSOSB(6), XRRCSAC , YRRCSAC , ZSSOSRP , YSSOSRP , YSSOSRP , YSSOSRP , YSSOSRP , YSSOSRP , ZSSOSRP , ZSSOSRP , ZSSOSRP , YSSOSRP , ZSSOSRP , ZSSOSRP , YSSOSRP , ZSSOSRP (2), ZSSORP (2), ZSSORP (2), ZSSORP (2), YSSOSR , YSSOSR , YSSOSR , ZSSORP , XSSORP , YSSOSR , YSSOSR , ZSSOSR , XSSOSR , YSSOSR , YSSOSR , YSSOSR , XSSOSR , XSSOCH(3), YSSOCH(3), YS		+XSSORRE ,YSSO +XSSOMRE ,YSSO	RRE , 2550RRE MRE , 2550MRE	, XSSOLRE , XSSOBOT	YSSOLRE ,	ZSSOLRE . ZSSOBOT .	
+XSSASRP ,YSSASRP ,ZSSASRP ,XRRDAP(2),YRRDAP(2),XRRDAP(2), +XRRSBO(6),YRRSBO(6),ZRRSBO(6),XSSOCP(2),YSSOCP(2),ZSSOCP(2), +XSSDAP(2),YSSDAP(2),ZSSDAP(2),XFSOAC ,YESOAC ,ZESOAC , +XSRCSAC ,YSRCSAC ,ZSRCSAC ,XSSOAC ,YSSOAC ,ZSSOAC , +XRSOSB ,YRSOSB ,ZRSOSB ,XRRSBOT ,YRRSBOT ,ZRRSBOT , +XRRSB ,YRRSB ,ZRRSB ,XSSOCH(3),YSSOCH(3),		+XSSOSB(6),YSSO +XSSCSAC ,YSSC	SB(6), 25505B(6 SAC , 255CSAC			ZRRCSAC . ZSSOSRP .	
+XSSDAP(2),YSSDAP(2),ZSSDAP(2),XSSDCP(2),TSSDCP(2), +XSSDAP(2),YSSDAP(2),ZSSDAP(2),ZSSDAC ,YESOAC ,ZSSDAC , +XSRCSAC ,YSRCSAC ,ZSRCSAC ,XSSDAC ,ZSSDAC , +XRSDSB ,YRRSDSB ,ZRSDSB ,XRRSBOT ,YRRSBOT , +XRRSB ,YRRSB ,ZRRSB ,XSSDCH(3),YSSDCH(3),		+XSSASRP YSSA	SRP , ZSSASRP	XRRDAP(2),	YRRDAP(2).	ZRRDAP(2),	
C .YSRCSAC .ZSRCSAC .YRSOSB .ZRSOSB .ZRSOSB .ZRSOSB .ZRRSB		+XSSDAP(2), YSSD	AP(2), ZSSDAP(2	), xESOAC	VESOAC .	ZESOAC .	
YRRSB ZRRSB		+XSRCSAC YSRC	SAC , ZSRCSAC	,		ZSS0AC .	
		n		XSSOCH(3)	VSSDCH(3)	ZSSDCH(3).	
. VAACSO . ZAACSO . XASOAC				XASOAC .	YASOAC .	ZASOAC .	

PAGE

```
83/11/07, 09.41.53
                                                          . TRAJCH(97.3)
. TRAJCH(97.3)
. QUATSQ(65)
. QUATAC(65)
. TRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTE DIFFERENTIAL EQUATIONS
 FTN 4.6+428
                                                                                                                                                                                 IYPRI 1X
IPYI 1X
IREIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C CONTROLLE LINEAR ACCELERATIONS BETWEEN TPREV AND TIME; C TKEEP IN MIND THAT TPREV IS BEING INCREMENTED BY SUBR RUNGE; C THE EQUATIONS ALSO TAKE INTO ACCOUNT THE FACT THAT THE C ACCELERATION BUST BE REVERSED, SINCE WE WANT THE C ACCELERATION OF THE OCCUPANT WAT THE SEAT.
                                                                                                                                                   . IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1Y12X
                                                                                                                                      . IYPRX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FZ = WZ = 0.0

IF(Z LT, ZBOT) FZ= SZNZ*(Z-ZBOT) + SZN1*ZBOT

IF(Z LT, 0.0) AND. (Z .GT, ZBOT)) FZ= SZN1*Z

IF(Z .GT, ZSLACK) FZ= SZP*(Z-ZSLACK)

WZZ= FZ/MASSOA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    XACC = TFRAC + (XACCEL(1) - XACC1) - XACCEL(1)
YACC = TFRAC + (YACCEL(1) - YACC1) - YACCEL(1)
ZACC = TFRAC + (ZACCEL(1) - ZACC1) - ZACCEL(1)
                                                          COMMON /RKUTTA / TIME , TIMES , DELTAT
TRAUSA(193) , TRAUDA(193)
TRAUDAC(193) , TVCEOS(225)
OUATSA(65) , QUATDA(65)
TRAUSTSA (65) , TVCEOS(65)
                                                                                                                                                   IKSUMX
IVIIX
IVPRIX
IPVIX
ICVIIX
                                                                                                                                                                                                                                                                                                                                                                                                                               FX = WX = 0.0
IF(X .LT. 0.0) FX= SXN+X
IF(X .GT. XSLACK) FX= SXP+(X-XSLACK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF(X .NE. O.O) WX = SQRT(ABS(WXX/X))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IF(2 .NE. 0.0) WZ = SQRT(ABS(WZZ/Z))
                                                                                                                                                                                                                                                          IF(IOYNG EQ. 0) RETURN
IF(TIME LE. 0.0) GOTO 250
IF(TEVENTS(28) .EQ. 0) GOTO 50
                                                                                                                                                                                  IVI3X
IVPRI2X
                                                                                                                                                                                                                                              O) RETURN
O) RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TFRAC= (TIME - TPREV)/DT
                                                                                                                                                                     XIXI
 0PT=1
                                                                                                                                                                                                                                                                                                                                                        DI= 11ME - TPREV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WXX* FX/MASSOA1
                                                                                                                                                                                                                                                                                                                                                                                      DO 100 IP=1,4
                                                                                                                                                                                                                                                                                                                                                                                                                 X-CGVAL(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Z=CGVAL(5)
                                                                                                                                                                                                                                                                                                            IDYNCG- 0
                                                                                                                                                                                                                                                                                                                            CONTINUE
 SUBROUTINE DYNAMCG
                                                                                                                                                                                                                                                                                                                          000
                                                                                                                                                                                                                                                                                                                                                                      U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ပ
                                                                                                                         20
                                             115
                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                        35
                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55
```

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                              C UPDATE POSITION OF OCCUPANT ALONE CG
                                                                                                                                                                                                                                                                                                                               FTN 4.6+428
                                                                                 CGDERV(3)= CGVAL(4)
CGDERV(4)= YACC - 2.0+CY+WY+CGVAL(4) - WYY+CGVAL(3)
                                                                                                                                                                                                                                                                                                                                         XCGNEW = (MASSDA1*XCGOA + MASSSA*XCGSA)/MASSSO
YCGNEW = (MASSDA1*YCGOA + MASSSA*YCGSA)/MASSSO
ZCGNEW = (MASSOA1*ZCGOA + MASSSA*ZCGSA)/MASSSO
                                       CGDERV(1)= CGVAL(2)
CGDERV(2)= XACC - 2.0+CX+WX+CGVAL(2) - WXX
                                                                                                                          CGDERV(5) = CGVAL(6)
CGDERV(6) = ZACC - 2.0+CZ+WZ+CGVAL(6) - WZZ
                                                                                                                                                                    CALL RUNGE (6, CGVAL, CGDERV, TPREV, DT, IP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DXCG - DXCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DXCG
DYCG
DZCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          XSSOCA(1) = XSSOCA(1) - DXCG
YSSOCA(1) = YSSOCA(1) - DYCG
ZSSOCA(1) = ZSSOCA(1) - DZCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DO 220 1=1,6
XSSGRK(1) * XSSGRK(1) - DXCG
YSSGRK(1) = YSSGRK(1) - DYCG
ZSSGRK(1) = ZSSGRK(1) - DZCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DD 230 I=1,3
XSSDCH(I) = XSSDCH(I) - DXCG
                                                                                                                                                                                                                                        XCGDA = XCGDAO + CGVAL(1)
YCGDA = YCGDAO + CGVAL(3)
ZCGDA * ZCGDAO + CGVAL(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XSSOCP(1) = XSSOCP(1)
YSSOCP(1) = YSSOCP(1)
ZSSOCP(1) = ZSSOCP(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XSSOSB(1) = XSSOSB(1)
YSSOSB(1) = YSSOSB(1)
ZSSOSB(1) = ZSSOSB(1)
                                                                                                                                                                                                                                                                                                                                                                                                  = XCGNEW-XCGSO
= YCGNEW-YCGSO
= ZCGNEW-ZCGSO
                                                                                                                                                                                                                                                                                                                UPDATE SEAT OCCUPANT CG
74/74 OPT=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YCGSO * YCGNEW ZCGSO * ZCGNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UPDATE MOMENT ARMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                           * XCGNEW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DO 210 1=1.2
                                                                                                                                                                                    CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           XCG50
                                                                                                                                                                                                                                                                                                                                                                                                    DXCG
DYCG
DZCG
SUBROUTINE DYNAMCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                       0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ပ
                                                                                                                                                          180
                                                                                    175
                                                                                                                                                                                                                                                                                                    96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  220
                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        225
```

SUBROUT	SUBROUTINE DYNAMCG 74/74 OPT=1	FIN 4.6+428	83/11/07. 09.41.53	PAGE	79
230	YSSOCH(1) = YSSOCH(1) - DYGG ZSSOCH(1) = ZSSOCH(1) - DZCG 230 CONTINUE XSSOBOT = XSSOBOT - DXCG YSSOBOT = YSSOBOT - DXCG ZSSOBOT = ZSSOBOT - DZCG				
235	C XSSOSRP = XSSOSRP - DXCG YSSOSRP = YSSOSRP - DYCG ZSSOSRP = ZSSOSRP - DZCG				
240	ç				
245	ZOU CONTROCT TAREVA TIME XACCI= XACCEL(I) YACCI= YACCEL(I) ZACCI= ZACCEL(I) RETURN END				

ا ار

DRTS  I IEVMES(C)  I IEVMES(C)  I IREPTS(C)  I IDATE HEADBOL REPTYPE I IPACICI MAXLINE I IDATE HEADBOL REPTYPE	C CALLED BY REPORTS  C COMMON / FEDORY / IREPTS(3)   FRTRG, PI1, PI2, PI3  INTEGER  C SECTION 2 COMMON BLOCK  C COMMON / REPORT / IREPTS(3)   FRTRG, PI1, PI2, PI3  INTEGER  C MISCELLANEOUS DATA COMMON BLOCK  C INTEGRATION ROUTINE COMMON BLOCK  C COMMON / RKUITA / TIME	COMMUNICATIONS CALLED BY:	i dinate de la constanta			• • •
C CALLED BY. REPORTS  C CALLED BY. REPORTS  C CALLES NONE  C COMMON WINES / IVWESS 3.89   159MES(4.8)   15FCL(6.8)  C COMMON A COMMON BLOCK  C MISCELLANGOUS DATA COMMON BLOCK  C MISCELLANGOUS PRIVATE   HEADORT H	COMMON / REDRIS  C SECTION 2 COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C INTEGRATION ROUTINE COMMON BLOCK  C COMMON / RRUITA / TIME /	CALLED BY:	bre			• •
COMMON / MEGR REPTYPE (5.31) PRTERQ. P11, P12, P13  COMMON / MISC / IEVMES(13.9)   ISPMES(4.8)   ISPECL(8)   COMMON / MISC / IEVMES(13.9)   ISPMES(4.8)   ISPECL(8)   COMMON / MISC / IEVMES(13.1)   PRTERQ. P11, P12, P13   COMMON / MISC / IEVMES(13.1)   IERPECATION   IERPECATION   IEVMES(13.1)   IERPECATION   I	C CALLS: NOWE  C C COMMON / KENES / IEVNES(3.38)   ISPNES(4.8)   ISPECL(8)   C COMMON / KENES / IEVNES(3.38)   ISPNES(4.8)   ISPECL(8)   C SECTION 2 COMMON BLOCK   C COMMON / MISC   IRAGE(13.1)   PRTRRQ, P11, P12, P13   INTEGER   MAXZINE   IRREPT   INTEGER   INTEGER   MAXZINE   IRRAPIT   INTEGER   REPTYPE   INTEGER   INTEGER	CALLED				
C SECTION 2 COMMON BLOCK C COMMON VAISC / IVVESS(3.88) ISSMES(4.8) ISPECL(6) C SECTION 2 COMMON BLOCK C COMMON VAISC / IPVESS(3.8) ISSMES(4.8) ISPECL(6) C SECTION 2 COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C MISCELLANEOUS	C C COMMON / EVHES / I EVHE (3.38)   I SPHES (4.8)   I SPECL (8)   C C COMMON / EVHES / I EVHE (3.38)   I SPHES (4.8)   I SPECL (8)   C C C COMMON / REDORT / I REFERS (1.9)   I SPECL (8)   C C C C COMMON / REDORT / I REFERS (1.9)   I SPECL (8)   C C C C C C C C C C C C C C C C C C C	′	2			•
C SCOTION 2 COMMON BLOCK C COMMON / IREPORT / IREPTS(3.38) ISPRES(4.6) ISPECL(6) C SCOTION 2 COMMON BLOCK C COMMON / IREPORT / IREPTS(3.1) PRTFRO, PI1, PI2, PI3 C MISCELLAMEDUS DATA COMMON BLOCK C MISCELLAMEDUS DATA COMMON BLOCK C MISCELLAMEDUS DATA COMMON BLOCK C C MISCELLAMEDUS DATA COMMON BLOCK C MISCELLAMEDUS DATA MAXEMENT DATA COLOR OF DATA (ISPRES(I. 1), I-1, 4) / OHARRRATI I HOMBACT WITH C MAXEMET DATA (ISPRES(I. 1), I-1, 4) / OHARRRATI I HOMBACT WITH C DATA (ISPRES(I. 2), I-1, 4) / OHORE CALL MISCANCE BEED C MAND (ISPRES(I. 2), I-1, 4) / OHORE CALL MISCANCE COLOR OF OHORE CALLONE OF OHORE CALONE OF OHOR	C COMMON / EVARS / IEVWES(3.38)   ISPWES(4.6)   ISPECL(6)   C COMMON / EVARS / IEVWES(3.38)   ISPWES(4.6)   ISPECL(6)   C C COMMON / IREDRY   IREPTS(3.1)   PRTFRO, P11, P12, P13   C C COMMON / REPORT   IREPTS(3.1)   PRTFRO, P11, P12, P13   C C MISCELLANEOUS DATA COMMON BLOCK   C MISCELLANEOUS   C MISCELLANEOUS DATA COMMON BLOCK   C MISCELLANEOUS DATA COMMON BLOCK   C MISCELLANEOUS   C MI					•
C SECTION 2 COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C INTEGER PREPIYEE  HEADER(24) INVOCEL(3) PRITINGT(28) PRITINGT  HEADER(24) INVOCEL(3) PRITINGT  HEADER(24) INVOCEL(3) PRITINGT  HEADER(24) INVOCEL(3) PRITINGT  HEADER(24) INVOCEL(3) PRITINGT  C INTEGER PREPIYEE  C INTEGER PRITINGT  HEADER(24) INVOCEL(3) PRITINGT  HEADER(34) PRITINGT  HEADER(34	C C COMMON / FAMES / I FYWE(3 38)   ISPME(4 68)   ISPECL(6)   C COMMON / FAMES / I FYWE(3 38)   ISPME(4 68)   ISPECL(6)   C COMMON / REDORT / IRFEP(5 31)   PRTERO, PI19 PI 3   C MISCELLAMEOUS DATA COMMON BLOCK C COMMON / MISC / IPMCEC(13)   LINECT(31)   IPMCINTS   C MISCELLAMEOUS DATA COMMON BLOCK C C MISCELLAMEOUS BLOCK C MISCELLAMEOUS BLOCK C C MISCELLAMEOUS BLOCK C MANANINE COMMON BLOCK C MISCELLAMEOUS BLOCK C MISCELLAMEOUS BLOCK C MANANINE COMMON BLOCK C MISCELLAMEOUS BLOCK C MANANINE COMMON BLOCK C MISCELLAMEOUS BLOCK C MISCELLAMEOUS BLOCK C MANANINE C MANANINE MISCELLAMEOUS BLOCK C MANANINE MISCELLAMEOUS BLOCK C MANANINE MISCELLAMEOUS BLOCK C MANANINE MISCELAM	٠	******	**********	*****	•
C COMMON / IREDGE / IEVNES(3,38)   ISPNES(4,8)   ISPECL(8)   C COMMON / IREDGE / IEVNES(3,38)   ISPNES(4,8)   ISPECL(8)   C SECTION 2 COMMON BLOCK   C MISCELLANEOUS DATA COMMON BLOCK   C MISCELLANEOUS DATA COMMON BLOCK   C MISCELLANEOUS DATA COMMON BLOCK   C COMMON / MISC / IPAGECT(31)   LINECT(31)   IPRTCNT(31)   HEADRI   HE	C EVENT MESSAGES COMMON BLOCK C COMMON /EVMES / IEVMES(3,38)   ISPMES(4,6)   ISPECL(6)   C SECTION 2 COMMON BLOCK C COMMON /IREPORT / IREPTS(31)   PRFFG,PI1,PI2,PI3   INTEGER		*************	***********		•
COMMON / FEVRES / IEVNES(3.38) ISPNES(4.8) ISPECL(6)  C. SECTION 2 COMMON BLOCK  C. COMMON VIREDORY / IREPS(3.1) PRFFRQ, PI1, PI2, PI3  INTEGER PREPER(2.1) PREPER(3.1)  C. MISCELLANEOUS DATA COMMON BLOCK  C. COMMON / MISC / IPAGEC(13.1) PREPING(12.1) PREPARE (1.1) PREPARE	C COMMON / EVMES / IEVMES(3.38)   ISPMES(4.6)   ISPECL(6)   C SECTION 2 COMMON BLOCK C C C C C C C C C C C C C C C C C C C		N BLOCK			•
COMMON / IRPORT / IRPTS(31)   PRFFRQ, PI1, PI2, PI3  C SECTION 2 COMMON BLOCK  C SECTION 2 COMMON PLOCK  C MISCELLANFONS BLOCK  C MISCELLANFONS DATA COMMON BLOCK  HEADON	COMMON /EVMES / IEVWES(3,38)   ISPWES(4,6)   ISPECL(6)   C SECTION 2 COMMON BLOCK C C SECTION 2 COMMON BLOCK C C MISCELLANEOUS DATA COMMON BLOCK C COMMON / RKUTTA / TIME TIMES DELLAT TRAJSO(193) TIMEGER PRIVAGHT PR		************	**********	*************	***
COMMON / IREPORT / IREPSES 11 PET FRQ, PI1, PI2, PI3  INTEGER  COMMON / REPORT / IREPSES 11 PER FRQ, PI1, PI2, PI3  INTEGER  COMMON / MISC / IPAGECT(31) LINCT(31) RAXENT  COMMON / MISC / IPAGECT(31) LINCT(31) RAXENT  HEADSH HEADY HEAD	C SECTION 2 COMMON BLOCK C C C C C C C C C C C C C C C C C C C	COMMON /EVINES	/ TEVMES/201	TEDMEC(A A	1 topici (a)	
COMMON / REDORY / IREPTS(31) PRFFRQ, PI1, PI2, PI3  COMMON / IREDORY / IREPTS(31) PRFFRQ, PI1, PI2, PI3  COMMON / MISC / IPAGECT(31) LINCT(31) MAXEWIT MAXEWIT LEADLE FEADLE FEATLE FEAT	COMMON / REPORT / IREPT(31)	COMMENT / EVELS	(C) (C) (C) (C) (C)			4 4 4 4 4
COMMON / IREPORT / IREPSESSI)  COMMON / IREPORT / IREPSESSI)  COMMON / IREPORT / IREPSESSI)  COMMON / IRES   PAGECTI31   LINCT(31)   IPRCNIT(31)    MAXLINE   HEADSH   HEADSH   HEADVEL    HEADSH   HEADSH   HEADVEL   HEADVEL    HEADSH   HEADSH   HEADVEL   HEADVEL    HEADSH   HEADSH   HEADVEL    HEADSH   HEADSH   HEADVEL    HEADSH   HEADSH   HEADVEL    HEADSH   HEADVEL   HEADVEL    HEADSH   HEADVEL   HEADVEL    HEADSH   HEADVEL   HEADVEL    HEADSH   HEADVEL   HEADVEL    HEADVEL   HEADVEL   HEADVEL    HEADVEL   HEADVEL   HEADVEL    HEADSH   HEADVEL   HEADVEL    HEADVEL    HEADVEL   HEADVEL    H	COMMON / REPORT / IREPTS(31) PRTFRQ.PI1.PI2.PI3  COMMON / MISC / IPAGECT(31) PRTFRCT(31) PRTFRCT(31)  COMMON / MISC / IPAGECT(31) MAXEPT MAXEVNT  HEADROL HEADNAT HEADNAT HEADNAT HEADPIT HEADNAT HEADPIT HEADROL MAXCEL(3) FWITHOX PRTEMP STORES PREMP STORES PREMP STORES STORES STORES PREMP STORES STOR					
C COMMON / TREPORT / IREPTS(31)	COMMON / IREPORT / IREPTG(31)	C SECTION 2 COMMON BL	DCK			•
COMMON / IREPORT / IREPTS(31) , PRTFRQ, P11, P12, P13  C MISCELLANEOUS DATA COMMON BLOCK  C C MISCELLANEOUS DATA COMMON BLOCK  C C C C C C C C C C C C C C C C C C	COMMON / IREPORT / IREPTS(31) PRTFRQ, PI1, PI2, PI3  C. MISCELLANEOUS DATA COMMON BLOCK  C. MISCELLANEOUS DATA COMMON BLOCK  C. COMMON /MISC / IPAGECT(31) LINECT(31) PRTVOT(1  + HEADRE   HEADRE   LU  + HEADRE   HEADRE   HEADRE   HEADRE    + HEADRE    + HEADRE   HEADRE    +	C*************************************	*************		************	*****
COMMON / MISC COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C MAXLINE HEADALT HEADPIT HEADP	INTEGER	COMMON /IREPORT	/ IREPTS(31)		1.PI2.PI3	
C MISCELLANEOUS DATA COMMON BLOCK  C COMMON /MISC / IPAGECT(31) LINECT(31)   IPRTCNT(31)  + HEADER   HEADALT   HEADPLI   HEADPLI    + HEADROL   HEADROL   HEADPLI   HEADPLI    + HEADROL   HEADROL   HEADPLI    - HEADROL   HEADPLI    + HEADROL   HEADROL   HEADPLI    - HEADPLI    - HEADROL   HEADPLI    - HEADROL   HEADPLI    -	COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(3  **MAXENT   MAXENT   MAXENT   MAXENT    **MAXENT   MAXENT   MAXENT    **MAXENT   MAXENT   MAXENT    **MAXENT   MAXENT   MAXENT    **MAXENT    **MA	TATE OF COLUMN	Daten out of	010		
COMMON /MISC   IAAGECT(31)   LINECT(31)   IPRCONT(31)	C MISCELANEOUS DATA COMMON BLOCK  C COMMON /MISC	INIEGER		2		
ISSELLANEOUS DATA COMMON BLOCK	TOOL   TOOL   TOOL	******	************	******		•
COMMON /MISC	COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT    **MAXLINE   HEADALT   HEADVEL    **HEADSR   HEADALT   HEADVEL    **HEADRALT   HEADVEL    **HEADRAT    **HEADVEL   HEADVEL    **HEADVEL    **	C MISCELLANEOUS DATA CI	OMMON BLOCK			•
COMMON / MISC	COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT    **MAXEINE	٠	•	*	***********	*****
HEADER   MAYE   18			/ 104CECT(24)	TAISCIT	TODICALL	_
### IEVLINE   HEADY   HEADVEL	TEVLINE   MAXREPT   MAXEVNI	COMMON / MISS	/ 15 AGE C. 1 3 1 7	. Linecol (31.)	•	
HEADLE   HEADLE   HEADLE	HEADVEL   HEADVEL   HEADVEL   HEADVEL	•	MAXLINE	. MAXREPT	. MAXEVNI	•
HEADSR   HEADVAW   HEADVIL	HEADSR   HEADVAW   HEADVIL	•	IEVLINE	IERRFLG		•
HEADER  HEADER	HEADER   HEADER   HEADER   HEADER   HEADER	•	10416	HEADALT	HEADVE	
HEADER   HEADER   HEADER   HEADER	HEADER				11.000	•
+ HEADMGT   HEADMGT   BIAS	HEADMGT	+	HEADSR	. HEADYAW	. HEADPIT	•
HEADER(24)   FEVENTS(38)   TIMES(38)	HEADER(24)   FEVENTS(38)   TIMES(38)	•	HEADROL	HEADWGT	BIAS	
HEADER(24)   IEVENTS(38)   THRESCIBLE   THRESCIBLE   TAVEL   TAVEL   PRTEMP(   PRTEM	HEADER(24)   IEVENTS(38)   TIMES(38)		•		111	•
HEADER(24)   IMEADER(38)   TIMES(38)	HEADER(24)   IEVENTS(38)   TIMES(38)	•		PRILING! (2)	TEST X	•
HANDC	HANDC   PRTMASS(2)   PRTINDX   PREMP(	+	IHEADER(24)	. JEVENTS (38	TIMES(38	•
+	+	•		THVDC		,
NIEGER   REPTYPE   YACCEL(3)	TYPETASS(2)		CO TOTAL CO.	ACIVILLO		•
+ XVCCEL(3) , XYZ(3)  - INTEGER	+ XVECEL(3) , XYZ(3)  - INTEGER	•	TRIMASS(Z)	YX 130	. FALVEL	•
+	+ KEPTYPE	•	ZVECT(3)		SAVTIME	•
INTEGER   REPTYPE   BIAS	INTEGER   REPTYPE   BIAS	*	XACCEL(3)	YACCEL(3)	, ZACCEL(3)	
PRTWGHT   PRTMASS   PRTEMP   PRTMASS   PRTMASS   PROMON BLOCK   PROMON BLOCK   PROMON BLOCK   PROMON PLOCK	PRTWGHT   PRTMASS   PRTM	INTEGER	REPTYPE	BIAS	PRILNGI	٠
PRTEMP	+ PRTEMP , PRTMASS  **********************************	+	THOMIDO			•
INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTTA / TIME . TIMES . DELTAT  TRAJSA(193) . TRAJDA(193) .  INTERNATIONAL .  INTERNATIONAL .  DATA ISPECL / O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O.O	INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTTA / TIME . TIMES . DELTAT  TRAJAK(193) . TYCEQS(225) .  TYCEQS(225) .	• •	DOT CE	DOTMACE	VOLTINO	
INTEGRATION ROUTINE COMMON BLOCK   COMMON   RKUTA   TIME   TIME5   DELTAT	INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME . TIMES . DELTAT  TRAJS(193) . TYCEGS(225) .  TRAJS(693) . TYCEGS(225) .  TRAJS(693) . TYCEGS(225) .  TRAJS(693) . TYCEGS(225) .  TYCEGS(225) .					
INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTA / TIME, TIMES, DELTAT  + TRAJAG(193), TRAJAG(193), TRAJAG(193), TVCEQS(225), TRAJAG(193), TVCEQS(225), TRAJAG(193), TVCEQS(225), TRAJAG(193), TVCEQS(225), TRAJAG(193), TRAJAG(193	INTEGRATION ROUTINE COMMON BLOCK	******	:		*	*****
COMMON /RKUTTA / TIME . TIMES . DELTAT  TRAJSA(193) . TRAJAA(193) .  TRAJAA(193) . TRAJAA(193) .  TRAJAA(193) . TRAJAA(193) .  TRAJAA(193) . TRAJAA(193) .  TRAJAA(193) . TRAJAA(193) .  TRAJAA . TRAJAA . TRAJA . TOCHMA .  DATA (ISPMES(1, 1), 1=1,4) / JOHAIRCRAFT I . TOHMP .  DATA (ISPMES(1, 2), 1=1,4) / JOHAEAT/OCC I . TOHMP .  TOTAL IN . TOHME . TOHME . TOHME .	COMMON /RKUTTA / TIME . TIMES . DELTAT  TRAJAC(193) . TRAJAC(193) .  TRAJAC(193) . TVCEQS(225) .  QUATSA(65) . QUATDA(65) .  HYCEQS(225) .  QUATSA(65) . QUATDA(66) .  TOTAL IN TOTAL . IN TATAL . IN TOTAL . IN	INTEGRATION ROUTINE	COMMON BLOCK			•
N	TRAUSA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TRAUGA(193)   TVCGOS(225)   OUATSA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(65)   OUATDA(66)   OUATDA		• • • • • • • • • • • • • • •	***********	*********	* * * • • •
TRAJSA(193) , TRAJGA(193) , TRAJGA(193) , TRAJGA(193) , TVCEQS(225) , QUATDA(65) , QUATDA(65) , INTSTP	TRAJSA(193) , TRAJGA(193) , TRAJGA(193) , TRAJGA(193) , TVCEQS(225) , QUATDA(65) ,	COMMON /RKUTTA		DFLTAT	TRA.ISO(193)	
TRAUSA(193)   TRAUSA(155)     TRAUSA(193)   TRAUSA(155)     QUATSA(65)   QUATDA(65)     INTSTP   IPCPASS     INTSTP   IVX     INTST   IVX     INTST   IVX     INTST   IVX     INTST   IVX     INTST   IVX     INTST   INTST     INTST     INTST   INTST     INTST   INTST     INTST   INTST     INTST     INTST   INTST     INTST	TRAUSA(193)   TREGS(225)   TRAUSA(193)   T	1	•	TO 1.10 1 ( 10.2 )	•	
UMATSA(65)   UVCEUS(225)   UMATSA(65)   UM	INAUAC(193)   IVCEGS(222)     INATSTP   IPCPASS   INTSTP   IPCPASS   INTSTP   IPCPASS   INTSTP   IPCPASS   INTSTP   ITSUMX   ITSUMS   IT	•	100 ) VC ) VC	TOTAL TOTAL	•	
OUATSA(65) . QUATDA(66) .  INTSTP . IPCPASS . IPDINTS . IXSUMX IXX IXSUMX IVIX . IVIX	OUATSA(65) . QUATDA(66) .  INTSTP . IPCPASS  IPDINTS . IYCA . IYIX  IYIX . IYIX . IYIX  IYIX . IYIX  IYIX . IYIX  IYIX . IYPRIX  ISPECL . IOVIX ICVIX  ISPECL . IOVIX ICVIX  ISPECL . IOVIX IOHMP	•	- KAUAC( 193)	VCEUS(225)	•	
INTSTP   IPCPASS   IRKG   IPCPASS   IRKG   IPOINTS   IVX   IXX	INTSTP	*	OUATSA(65)	OUATOA(65)	. QUATAC(65)	
IPDINTS   IVX   IVPE	IPDINTS	•	INTSTP	IPCPASS	IRKPASS	
IKX	IKX	•	IPOINTS	XXI	TVPRX	
IVIX	INTERPORT   1   1   1   1   1   1   1   1   1	. 4		7.0011047	×004071	•
I	I	•		(E) (C)	( ) ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	
IVI3X   IVPRIX   IVPRIX   IVPRIX   IVPRIX   IVPRIX   IPVIX	IVPRIZX   IVPRIX   IVPR   IVPR   IVPR   IVPR   IVPR   IVPR   IVP   IVPR   IVP	•	. XIVI	IVITA	. 1712A	
IYPRI2X   IPYIX   IPYIX   IPYIX   ICYIX   ICXIX   IC	IYPRIZX   IPYIX   IPYIX   IPYIX   IPYIX   ICYI1X   ICYINTE FULL IN   ICHINTACT   ICHINTE FULL IN   ICHINTACT   ICHINTACT   ICHINTE FULL IN   ICHINTACT   ICHINTACT   ICHINTE FULL IN   ICHINTACT   I	•	IVIOX	IYPRIX	IYPRI 1X	
ICYIX	ICYIX	+	I YPR12X	IPYIX	TPVIIX	
SPECL	ISPECL	•	XIAGI	11.Y11X	NI WAL	
(ISPMES(I, 1), I*1,4) / 10HAIRCRAFT I, 10HMPACT 10H SEAT DCCU, 10HPANT (ISPMES(I, 2), I*1,4) / 10HSEAT/DCC I, 10HMPACT 10HRE FULL IN, 10HFLATIC (ISPMES(I, 3), I*1,4) / 10HDCC, ALONE, 10H IMPAC	(ISPMES(I, 1), I=1,4) / 10HARCRAFT I , 10HMPACT 10H SEAT DCCU , 10HPANT (ISPMES(I, 2), I=1,4) / 10HSEAT/DCC I , 10HMPACT 10HRE FULL IN , 10HFLATIC (ISPMES(I, 3), I=1,4) / 10HDCC ALONE , 10H IMPACT (ISPMES(I, 3), I=1,4) / 10HDCC ALONE , 10H IMPACT INPACT			/ 0 0		
(ISPMES(I, 2), I=1,4) / 10HSEAT/DCC I , 10HPANT	(ISPMES(1, 2), I=1,4) / 10HSEAT/DCC I , 10HMPACT 10HMPACT 10HRE FULL IN , 10HFLATIG (ISPMES(1, 3), I=1,4) / 10HDCC ALONE , 10H IMPACT 118PMES(1, 3)	( I SPINES / I			CHMPACT WITH	
(ISPMES(I, 2),I=1,4) /10HSEAT/DCC I, 10HMPAGT 10HRE FULL IN . 10HMPAGT (ISPMES(I, 3),I=1,4) /10HDCC. ALONE . 10H IMPAG	(ISPMES(I, 2), I-1,4) / 10HSEAT/DCC I . 10HMPACT 10HRE FULL IN . 10HFLATIC (ISPMES(I, 3), I-1,4) / 10HDCC. ALONE . 10H IDPAC	. 1 Jr Mr 3 ( 1 .	`		, and the state of	
(15PMES(1, 3),1-1,4) / 10HDCC 1, 10HELATIC (15PMES(1, 3),1-1,4) / 10HDCC ALONE , 10H 1MPAC	(ISPMES(I, 3), I=1,4) / IOHSE FULL IN , IOHFLATIC (ISPMES(I, 3), I=1,4) / IOHOCC, ALONE , IOH IMPAC	, , come c / ,	1	•	۰	
10FIRE FULL IN (15PMES(1, 3),1=1,4) /10HDCC ALONE	(ISPMES(I, 3), I*1,4) / 10HDCC, ALONE	( I SPMCS( I ,	`	•	CHAPACI BELD	
(1SPMES(1, 3), 1=1,4) / 10HDCC. ALONE	(1SPMES(1, 3),1*1,4) /10HDCC. ALONE		•	•	CHELA LIUN	
		(ISPMES(I)		•	OH IMPACT BE .	

SUBROUTINE EVENT	ENT	74/74 OPT=1		FTN 4.6+428	83/11/07. 09.
	DATA	(1SPMES(I, 4),1-1.4)	/ TOHPERIGEE OF .	10H TRAJECTOR .	
09	DATA	(IEVMES(1, 1),1=1,3)	/ 10HCATAPULT 1 .	10H IGNITION .	
	DATA	(IEVNES(1, 2),1=1,3)	10H /10HCATAPULT 2 .	10H IGNITION	
	DATA	(1EVMES(1, 3),1=1,3)	10H /10HCATAPULT 1 ,	10H SEPARATIO	
65	DATA	(IEVMES(I, 4),I=1,3)	10HN /10HCATAPULT 2 .	10H SEPARATIO	
	+ DATA	(IEVMES(I, 5),1#1,3)	10HN /10HRAIL SEPAR ,	10HATION .	
02	DATA	(IEVMES(I, 6),1=1,3)	10H / 10HROCKET † 1 .	10HGNITION .	
	DATA	(IEVMES(1, 7),1=1.3)	10H /10HR0CKET 2 I .	OHGNITION .	
	DATA	(IEVMES(1, 8),1*1,3)	10H /10HROCKET 3 I ,	OHGNITION .	
75	DATA	(IEVMES(I, 9),1=1,3)	10H /10HROCKET 4 1 .	OHENITION	
	+ DATA	(IEVMES(I,10),I=1,3)	10H /10HROCKET 5 1 ,	10HGNITION .	
09	DATA	(IEVMES(1,11),1#1.3)	10H /10HROCKET 6 I ,	10HGNITION ,	
	DATA	(1EVMES(I,12),1-1.3)	10H /10HROCKET 1 B .	10HURNDUT	
	+ DATA	(IEVMES(1,13),1=1,3)	10H /10HRDCKET 2 B .	10+NRNOUT	
85	DATA	(IEVMES(I,14),1±1,3) /	IOH IOHROCKET 3 B ,	10HURNDUT ,	
	DATA	(IEVMES(1.18).1-1.3)	10H / 10HROCKET 4 B	10HURNDUT .	
06	DATA	(IEVMES(1.16),1=1,3) /	(C)	10HURNOUT	
	+ DATA	(IEVMES(1,17),1×1,3)	9	10HURNOUT	
	+	/ (E 1=1 (8) 175MC21)	10H	/ / / / / / / / / / / / / / / / / / /	
95		(0) (0		, , , , , , , , , , , , , , , , , , , ,	
	4 A A	(1EVMES(1,19),1=1,3) /	TOHRETCH CHU .	TORILE LINE SI	
	DATA	(IEVMES(1,20),1=1,3)	/ TOHOROGUE CHU .	10HTE FULL IN ,	
50	DATA	(1EVMES(1,21),1-1,3)	/ IOHVELCON DRO .	IOHGUE SYSTEM .	
	DATA	(IEVMES(1.22), I=1.3) /	F E	TOT.	
	DATA	(IEVMES(1,23),1*(,3)	/ TOHSMALL CHUT ,	TOHTE FULL IN .	
105	DATA	(1EVMES(1,24),1=1,3)	10HFLATION /10HRECOVERY C .	TOPHIUTE DEPLO .	
	DATA	(IEVMES(1,25),1=1,3)	10HYMENT /10HRECOVERY C .	10HHUTE LINE .	
110	DATA	(IEVMES(I.26),1*1.3) /	10HSTRETCH / 10HRECDVERY C ,	10HHUTE FULL .	
	DATA	(IEVMES(1,27),1=1,3)	10HINFLATION /10HPEAK TRAJE .	+OHCTORY .	
	+ DATA	(IEVMES(1.28),1*1.3) /	IOH IOHSEAT/OCCUP ,	/ 10HANT SEPARA .	

```
C ARRAY IEVENTS IS DIMENSIONED SUCH THAT EVERY EVENT THAT COULD HAPPEN C HAS A CORRESPONDING POSITION IN THE ARRAY. WHEN THE EVENT DOCCURS. C THAT POSITION IS SET TO 1 AND A CORRESPONDING EVENT MESSAGE (FOUND C IN ARRAY IEVMES) IS PRINTED ON EVERY REPORT REQUESTED. C ALSO. AFTER A PARTICULAR EVENT HAS OCCURRED THE CORRESPONDING C POSITION IN ARRAY IEVENT IS ALSO SET TO TWO (2) TO INDICATE THAT THE C EVENT HAD OCCURRED AND THAT THE MESSAGE HAS BEEN PRINTED. LINE COUNTS ARE KEPT (IN ARRAY LINE(T) TO PREVENT PAGE RUN OFF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C THERE ARE SIX SPECIAL CASES WHICH ARE TESTED FOR BELOW.

C IF A SPECIAL CONDITION IS FOUND THEN A FLAG IS SET (IN ARRAY ISPECL) *

C AND USED IN THE FOLLOWING DO LODPS TO DETERMINE WHICH SPECIAL EVENT *

C MESSAGE IS TO BE PRINTED. THEN THE SPECIAL MESSAGES (FOUND IN ARRAY *

C ISPMES) ARE PRINTED ON EVERY REPORT THAT HAS BEEN REQUESTED. *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF (IEVENTS(32) .NE. O .AND. IEVENTS(37) .EQ. O) ISPECL(1)=1
IF (IEVENTS(29) .NE. O .AND. IEVENTS(26).EQ. O) ISPECL(2)=1
IF (IEVENTS(30) .NE. O .AND. IEVENTS(26).EQ. O) ISPECL(3)=1
BO 800 I=1 .6
IF (ISPECL(I) .NE. 1) GO TO 800
DO 750 K=2 .MAXREPT
                                                                                     DATA (IEVMES(I,30), I=1,3) / 10HDCCUPANT A , 10HLONE IMPAC
                           DATA (IEVMES(1,29),1*1,3) /10HSEAT/DCCUP , 10HANT IMPACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATA (IEVMES(1,37),1+1,3) /10HSEAT SEPAR ,10HATION FROM
                                                                                                                                                                                                                                                                    DATA (IEVMES(1,33),1=1,3) /10HDART START ,10H RIGHT LIN,
                                                                                                                                                                                                                                                                                                                              DATA (IEVMES(1,34),1+1,3) /10HDART START ,10H LEFT LINE
                                                                                                                                                                                                                                                                                                                                                                                     NOHRIGHT LINE
                                                                                                                                                                                                                                                                                                                                                                                                                                             , 10HLEFT LINE
                                                                                                                                                DATA (IEVMES(1,31),I=1,3) / 10HSEAT ALONE , 10H IMPACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10H AIRCRAFT
DATA (IEVMES(1,38),1=1,3) /10HSEAT FIRST ,10H MOTION
                                                                                                                                                                                                          DATA (IEVMES(1,32),1+1,3) / 10HAIRCRAFT 1 , 10HMPACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WRITE(LU,7000) TIMES(I), (IEVMES(J,I),J=1,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                DATA (IEVMES(1,36),1=1,3) /10HDART 5TOP
                                                                                                                                                                                                                                                                                                                                                                                        DATA (IEVMES(1,35),1=1,3) / 10HDART STOP
NOT THO
                                                                                                                                                                                                                                                                                                  10HE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DO 500 1=1, MAXEVNT
1F(IEVENTS(I), NE. 1) GO TO 500
                                                                                                                                                                                                                                                                                                                                                               ξ
                                                                                                                                                                                                                                                                                                                                                                                                                         ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ₹
                                                                                                                                                                                                                                        ₫
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DO 250 K=2, MAXREPT
IF(IREPTS(K) .EQ. 0) GO TO 250
LU = K + BIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINECT(K) - LINECT(K) + 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IEVENTS(I) = 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IEVLINE=0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  250 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 500 CONTINUE
                                                                                                                                                  200
115
                                                                                                                                                                                                                                                                                                  125
                                                                                                                                                                                                                                                                                                                                                                                                                                                     130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        155
```

SUBROUTINE EVENT	E EVENT	74/74	0PT = 1		FIN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE	 50
	<u> </u>	(IREPTS(K) = K + BIAS	. <b>E</b> 0. 0)	IREPTS(M) .Eq. 0) GO TO 750 = M + BIAS					
175		URITE(LU,7500) TIME (1587) LINECT(K) = LINECT(K) + 1 ISPECL(I) = 0	) TIME INECT(K)	TE(LU, 7500) TIME , (137MES(U,1),U=1,4) ECT(K) = LINECT(K) + 1 ECL(K) = 0					
	900 CO	NI INUE NT INUE TURN							
180	C WRITE	C WRITE FORMAT STATEMENTS	EMENTS	Conservation STATEMENTS		• • •			
	7000 F0	RMAT ( 1X, F9.		7000 FORMAT(1X,F9.4, "************************************	1X, 3(A10))	:			
185	C WRITE I	FORMAT STAT	EMENTS	C WRITE FORMAT STATEMENTS FOR SPECIAL EVENT MESSAGES	GE S	•:			
	7500 FOI	RMAT(1X,F9.		7500 FORMAT( 1X, F9.4, ", 1X, 4(A10)) END					

;	+ INTEGER	XACCEL(3) REPTYPE	, YACCEL(3) , BIAS	, ZACCEL(3) , PRTLNGT			
3	• •		PRIMASS	. PRTINDX			
65	C. IF IUNITS = 0 THEN METRIC VALUES ARE TO BE PRINTED C IF IUNITS = 4 THEN ENGLISH VALUES ARE TO BE PRINTED C THEREFORE CALCULATE AN INDEX INTO ARRAYS PRILNGT AND PRINGHI C LISED FOR PRINTING THE PROPER UNITS OF MEASUREMENTS	METRIC VALUES ARE TO BE PRINTED ENGLISH VALUES ARE TO BE PRINTED AND INDEX INTO ARRAYS PRILUGT AND HE PROPER UNITS OF MEASUREMENTS	E TO BE PRINTER E TO BE PRINTER RAYS PRILNGT AP		2 4 4		
	PRTINDX = IUNITS + 1	TINDX = IUNITS + 1		•	•		
0,	C. LOGICAL UNIT NUMBERS FOR OUTPUT MUST BE GREATER THAN OR EQUAL TO C FIVE (5) AND LESS THAN OR EQUAL TO THE MAX NUMBER OF REPORTS + C A BIAS OF FOUR (4). NOTE: REPORTI IS WRITTEN TO LU 5,	FOR OUTPUT MUST AN OR EQUAL TO TH NOTE: REPORT!	BE GREATER THATE HATE MAX NUMBER (	IN OR EQUAL TO IF REPORTS + U 5,	••••		
75	C	REPORT2 IS WRITTEN TO LU 6 AND SO ON IF (LU .LT. 5) .OR. (LU .GT. (MAXREPT + 4))) GO TO 9900	IS WRITTEN TO 1	.U 6 AND SO ON	•		
9	Construction of the Constr	TOTALEN STORY OF THE STORY OF T		•	•		
}	LINECT(K) = 0 WRITE (LU, 7001) WRITE(LU, 7002) ( WRITE(LU, 7003) (	LINECT(K) = 0  WRITE (LU, 7001) IDATE, IPAGECT(K)  WRITE(LU, 7002) (IMEADER(I), I=1, 16)  WRITE(LU, 7003) (IMEADER(I), I=17, 24)	5) 24)				
<b>8</b> 8 2	WRITE(LU, 7004) H WRITE(LU, 7005) H WRITE(LU, 7005) H	HEADALT, PRTLNGT(PRTINDX) PRTLNGT(PRTINDX), HEADSR HEADYAW, HEADPIT, HEADROL HEADWGT, PRTWGHT(PRTINDX)		HEADVEL, PRTLNGT(PRTINDX)			
06	C CALCULATE THE INDEX INTO ARRAY REPTYPE AND PRINT THE REPORT TYPE C NOTE: EACH REPORT HAS A REPORT TYPE IN ARRAY REPTYPE C . I.E. REPORTE USES REPTYPE(1,6) THRU REPTYPE(5,6)	INTO ARRAY REPTYR	PE AND PRINT THE IN ARRAY REPTY	IE REPORT TYPE PPE 5.6)	••••		
9 2	C AND REPU C WRITE(LU, 7007) K GO TO 9999	MND REPURTE USES LU (LUGICAL UN WRITE(LU,7007) K, (REPTYPE(I,K),I=1,5) GO TO 9999	ICAL UNIT) 10 F	ok gurpur	•		
8	C WRITE AN ERROR MESSAGE DUT TO REPORT!  C AND SET ERROR FLAG (TERRELG) TO DNE(1)  C TO INDICATE TO THE CALLING ROUTINE THAT A FATAL ERROR HAS OCCURRED  C. OCCURRED TO THE CALLING ROUTINE THAT A FATAL ERROR HAS OCCURRED TO THE CALLING ROUTINE THAT A FATAL ERROR TO THE CALLI	AN ERBOR MESSAGE OUT TO REPORT!  SET ERROR FLAG (IERFLG) TO ONE(1)  JICATE TO THE CALLING ROUTINE THAT A FATAL ERROR HAS OCCURRED  INTINUE	DNE(1) 4at A FATAL ERR	OR HAS OCCURREC			
105	WRITE(5,9001) LU IERRFLG * 1						
9	• 7 • Ö W •	TO THE CALLING ROUTINE. NITIMUE TURN					
	Comments Statements Comments TOO! FORMAT(1H1, 12X, "DATE:	• ш	". A10,90X,"PAGE ",13)		•		

5:1

20

125

00808000808000800000	•	SUBROUTINE IDIRMIX (DCM.PHI.PSI.THETA)	:
C METHOD - USES INPUT MODIFIED EULER ANGLES C CALLED BY: C DCM - COMMUNICATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CALL) C DFI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CALL) C DFI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CALL) C SINPH I) C SINPH I) C SINPH I) C COSPH I) C COSPH I) C SINPH I) C COSPH I) C COSTHE I) C COSTHE I) C COSTHE I) C COSTHE IS IN CALLED BY: C COSTHE		DESCRIPTION - LEVEL 4 FUNCTION - FUNCTIONAL	
C CALLED BY:  C CALLED BY:  C CALLES:  NON-COMMON VARIABLES DEFINED -  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DOM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C SINPHI )  C COSPHI )  C COSPHI )  C COSPHI )  C DIMENSION DOM (3, 3)  SINPHI = SIN(PHI)  C COSPHI = COSPHI    SINPHI = SIN(PHI)  C COSPHI = COSPHI + SINPHI + COSPHI + SINPHI    C COSPHI = COSPHI + COSPHI    C COSPHI = COSPHI + SINPHI    C DOM (3, 1) = SINPHI    C COSPHI = COSPHI + COSPHI    C DOM (3, 2) = COSPSI + SINPHI    C COSPHI = COSPSI + SINPHI    C C	ND.		
C CALLED BY:  C CALLS:  NONE  C CALLS:  NON-COMMON VARIABLES DEFINED -  C DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C PSI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CALTATA ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CASSED		COMMU	. •
C CALE:  NONE  C NON-COMMON VARIABLES DEFINED -  C DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)  C SINPH   PS   ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN COSTINE)  C SINPH   PS   COSTINE   PS   COSTINE VALUES  C COSPEL   PS   COSTINE   COSTINE   COSTINE VALUES  C COSPEL   PS   COSTINE   COSTIN			•
C CALLS:  C CALLS:  NONE  C NON-COMMON VARIABLE DEFINED -  C DCM - COMPUTED 33.3 MATRIX (RETURNED IN CALL)  C DCM - COMPUTED 33.3 MATRIX (RETURNED IN CALL)  C PHI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CITETA ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN CITETA ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN CITETA ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN COSPHI)  C COSPHI )  C COSPHI )  C SINPHI )  C COSTHE )  C COSTHE )  C POTENTIAL ERROR CONDITIONS -  C DIMENSION DCM(3,3)  SIMPHI = SIN(PHI)  C COSPHI - COS(PHI)  SIMPSI = SIN(PRI)  COSPHI - COS(PHI)  SIN(PSI = COS(THETA)  COSTHE - COS(THETA)  COS(THETA)  COSTHE - COS(THETA)  C COS(			•
C COMPLEE S DEFINED - C DCM COMPANDED 33 MATRIX (RETURNED IN CALL.) C DCM COMPANDED 33 MATRIX (RETURNED IN CALL.) C DCM COMPANDED 33 MATRIX (RETURNED IN CALL.) C DHI ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN C THETA ROTATION ABOUT THE Z-AXIS IN RADIANS (PASSED IN C SINPHI ) C SINPHI ) C COSPHI ) C SINPHI ) C COSPHI ) C COSPHE COSPHI ) C COSPHE COSPHI ) C COSPHE COSPHI ) SINPHI SIN(PHI ) C COSPHI COSPHI COSPHI SINPHI SINPHI SINPHI SINPHI COSPHI SINPHI SINPHI SINPHI COSPHI SINPHI COSPHI SINPHI COSPHI	10		•
C NON-COMMON VARIABLES DEFINED - C DOM - COMPUTED 3X3 MATRIX (RETUBNED IN CALL) C DOM - COMPUTED 3X3 MATRIX (RETUBNED IN CALL) C PHI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN CASINPHI ) C SINPHI ) C COSPHI ) C COSPHI ) C COSPHI ) C COSPHI ) C COSPH C COSPH ) C COSPH C COSPH C			•
C DCM - CDMPUTED 3X3 MATRIX (RETURNED IN CALL)  C PSI - ROTATION ABOUT THE X - AXIS IN RADIANS (PASSED IN CTHETA - ROTATION ABOUT THE X - AXIS IN RADIANS (PASSED IN COSPY)  C SINPHI)  C SINPHI)  C SINPHI)  C SINPHI - INTERMEDIATE SINE AND COSINE VALUES  C COSPSI - INTERMEDIATE SINE AND COSINE VALUES  C COSPSI - INTERPREDIATE SINE AND COSINE VALUES  C COSPSI - INTERPREDIATE SINE AND COSINE VALUES  C SINTHE    C COSPSI - INTERPREDIATE SINE AND COSINE VALUES  C SINTHE    C SINTHE    C COSPSI - INTERPREDIATE SINE AND COSINE VALUES  C SINTHE    C SINTHE    C SINTHE    C SOSPSI - INTERPREDIATE SINE VALUES  C SINTHE SIN (PHI)  C SINTHE SIN (PHI)  SINTHE SIN (PHI)  SINTHE SIN (PHI)  C COSPI - COS (PHI)  SINTHE SIN (PHI)  C COSPI - COS (PHI)  SINTHE SIN (PHI)  C COSPI - COS (PHI)  C SINTHE SIN (PHI)  C COSPI - COSPHI - SIN (PHI)  C COSPHI - SIN (PHI)  C COSPHI - SIN (PHI)  C SIN (1, 2) - COSPHI - SIN (PHI)  C COSPHI - SIN (PHI)  C COSPHI - SIN (PHI)  C SIN (1, 2) - COSPHI - SIN (PHI)  C COSPHI - COSPHI - COSPHI - COSPHI - SIN (PHI)  C COSPHI -		NON-COM	•
C PHI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN C HETA - ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN C SINPH) C SINPH) C COSPHI C COSPHI C COSPHI C COSTHE ) C COSTHE C COS (PHI) C COSPHI = COS (PHI) C COSTHE C COSTHE COSPHI + SINPHI+SINPSI+COSTHE D C C C C C C C C C C C C C C C C C C C		DCM - COMPUTED 3X3 MATRIX (RETURNED IN CALL)	•
C PSI - ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN C SINPHI) C COSPHI) C COSPHI) C COSPSI		PHI - ROTATION ABOUT THE X-AXIS IN RADIANS (PASSED IN	•
C THETA - ROTATION ABOUT THE Z-AXIS IN RADIANS (PASSED IN C SINPHI) C COSPHI) C COSPSI) C COSPSI) C COSPSI) C COSTHE ) C DIMENSION DCM(3,3) SINTHE   C ANTITIONS - NONE C ANTITIONS - NONE C COSTHE   C COSTHE   C COSTHE   C COSPHI = SIN(PHI) COSPHI = SIN(PHI) SINPHI = SIN(PHI) COSPHI = SIN(PHI) COSPHI = SIN(PHI) COSPSI = COSPSI + COSTHE DCM(1,1) = COSPSI + COSTHE DCM(2,2) = COSTHE + SINPHI + SINPHI + SINPHI + SINTHE DCM(2,2) = COSTHE + COSPHI + SINPHI + SINTHE DCM(3,2) = COSTHE + COSPHI + SINPHI + SINTHE DCM(3,2) = COSTHE + COSPHI + SINPHI DCM(3,2) = COSTHE + COSPHI + SINPHI DCM(3,3) = COSPSI + COSPHI + SINPHI BCM(3,3) = COSPSI + COSPHI + SINPHI + COSPHI	51	PSI - ROTATION ABOUT THE Y-AXIS IN RADIANS (PASSED IN	•
C SINPHI ) C COSPHI ) C SINTHE ) C SINTHE ) C SINTHE ) C SINTHE ) C POTENTIAL ERROR CONDITIONS C NONE C NONE C NONE C SINPHI = SINCHI   C SINPHI = SINCHI   C SPRI = COSC   SINPHI = SINCHI   C SPRI = COSC   SINPHI = SINCHI   C STHE = COSC   C STHE   C S		ROTATION ABOUT THE Z-AXIS IN RADIANS (PASSED IN	•
C COSPHI ) C SINPSI ) - INTERMEDIATE SINE A C COSTHE ) C COSTHE ) C COSTHE ) C COSTHE   C COSTHE   C MONE   C ***********************************			•
C SINPSI ) - INTERMEDIATE SINE A C COSPEI ) C SINTHE ) C COSTHE ) C COSTHE ) C DIMENSIAL ERROR CONDITIONS  C NONE C NONE C STATE  C SINPHI = SIN(PHI) C COSPH = COS(PHI) SINPHI = SIN(PHI) COSPH = COS(PHI) SINPHI = SIN(PHI) COSPSI = COS(PHI) COSPSI = COS(PHI) COSPSI = COS(PHI) COSPSI = COS(PHI) COSPSI = COSPSI + COSPHI +  DCM(1,1) = COSPSI + COSPHI +  DCM(1,2) = COSPSI + SINPHI +  DCM(2,2) = COSPSI + COSPHI +  DCM(2,3) = COSPSI + COSPHI +  DCM(3,3) = COSPHI +  DCM(3		COSPHI )	•
C COSPSI ) C COSTHE ) C COSTHE ) C POTENTIAL ERROR CONDITIONS - C NONE C NO C NONE C N		` <b>~</b>	•
C SINTHE ) C COSTHE ) C POTENTIAL ERROR CONDITIONS NONE C NONE C NONE C SINPHI = SINCHI) COSPHI = COS(PHI) SINPHI = SIN(PHI) COSPI = COS(PHI) SINPHI = SIN(PHI) COSPI = COS(PHI) COSTHE = COS(THE A) COM(1, 1) = COSPI = COSPHI + COM(1, 2) = COSPI = COSPHI + COM(1, 2) = COSPI = COSPHI + COM(1, 3) = SINPHI + COSPHI + COM(1, 3) = SINPHI + COSPHI + COM(2, 2) = COSPSI + COSPHI + COM(2, 3) = COSPSI + COSPHI + COSP = COSP = COSPHI + COSP = COSPHI + COSP = COSP = COSPHI + COSP = COSP = COSP = COSPHI + COSP =	20	C COSPSI )	•
C COSTHE ) C POTENTIAL ERROR CONDITIONS - C NONE C NONE C SINPHI = SIN(PHI) COSPHI = COS(PHI) SINPHI = SIN(PHI) COSPSI = COS(PSI) SINPHE = SIN(PHI) COSPSI = COS(PSI) COSPHI = COS(PSI) COSTHE = COS(PSI) COSTHE = COS(THEIA) COSTHE = COS(THEIA) COSH = COSTHE + COSPHI + COCM(1,1) = COSPSI + COSPHI + COCM(1,2) = COSPSI + SINPHI + COCM(1,2) = COSPSI + SINPHI + COCM(3,2) = COSPSI + SINPHI + COCM(3,2) = COSPSI + SINPHI COCM(3,2) = COSPSI + COSPHI + COCM(3,2) = COSPSI + COSP + COSPHI + COCM(3,2) = COSPSI + COSP + COSPHI + COCM(3,2) = COSP + COSPHI + COCM(3,2) = COSP + COSPHI + COCM(3,2) = COSPHI + COCM			•
C POTENTIAL ERROR CONDITIONS - C MONE C MONE C STAPPLE COS(PHI) SINPHIE SIN(PHI) COSPSIE COS(PHI) SINPHE SIN(PHI) COSPSIE COS(PHI) SINFE SIN(PSI) COSPSIE COS(PSI) COSPSIE COS(THETA) COSTHE COS(THETA) COS(THETA		COSTHE )	•
C		POTENTIAL ERROR CONDITIONS	•
C		C	•
DIMENSION DCM(3,3)  \$INPHI = \$SIN(PHI)  \$COSPHI = \$COS(PHI)  \$SINPSI = \$SIN(PHI)  \$COSPSI = \$COS(PSI)  \$COS(IHE A)  \$COS(	25	• • • •	:
SINPHI = SIN(PHI)  COSPH = COS(PHI)  SINPSI = COS(PHI)  COSPSI = COS(PSI)  COSPETE = COS(THETA)  COS(THE TA)		DIMENSION DCM(3,3)	
COSPHI = COS(PHI)  SINPSI = SIN(PSI)  COSPSI = COS(PSI)  SINTHE = SIN(THETA)  COSTHE = COS(THETA)  COM(2,1) = COSPSI • COSTHE  DCM(2,1) = SINTHE • SINTHE  DCM(2,1) = SINTHE • SINTHE  DCM(2,2) = COSPSI • SINTHE  DCM(2,2) = COSPSI • SINTHE  DCM(1,2) = COSTHE • COSPHI • DCM(1,2) = COSTHE • COSTHE  DCM(2,2) = COSTHE • COSTHE • DCM(1,3) = SINPSI  DCM(2,3) = COSPSI • SINPHI  BCM(3,3) = COSPSI • SINPHI  BCM(3,3) = COSPSI • SINPHI  RETURN			
SINPS1= 5IN(PS1) COSPS1= COSPS1  SINTHE= SIN(THETA) COSTHE= COS(THETA) COM(1,1) = COSPS1+COSTHE DCM(2,1) = -SINTHE+COSPH1+ DCM(3,1) = SINTHE+SINPH1+ DCM(3,1) = COSPS1+SINTHE+ DCM(1,2) = COSPS1+SINTHH+ DCM(3,2) = COSPS1+SINTHH+ DCM(3,2) = COSPS1+SINTHH+ DCM(3,3) = COSPS1+SINTHH+ DCM(3,3) = COSPS1+SINTHH+ BCM(3,3) = COSPS1+SINTHH+ RETURN END			
COSPSI = COS(PSI)  SINTH= SIN(THETA)  COSTHE = COS(THETA)  COSTHE = COS(THETA)  COM(1.1) = COSPSI+COSTHE  COM(3.1) = SINTHE *COSPHI +  COM(3.1) = COSPSI+COSPHI +  COM(3.2) = COSPHE *COSPHI +  COM(3.2) = COSPI+COSPHI +  COM(3.3) = COSPSI+SINPHI  COM(2.3) = COSPSI+SINPHI  COM(3.3) = COSPSI+SINPHI  COM(3.3) = COSPSI+COSPHI  RETURN  END			
SIGNING SIGNING THE A)  COSTHE COS(THEIA)  DCM(1,1) = COSSIS-COSTHE  DCM(3,1) = SINTHE *COSPHI +  DCM(1,2) * COSPIS-SINPHI +  DCM(1,2) * COSPHE *SINPHI +  DCM(1,2) * COSPHE *COSPHI +  DCM(2,2) * COSPIS-SINPHI  DCM(2,3) * COSPIS-SINPHI  DCM(2,3) * COSPSI*SINPHI  ENG(2,3) * COSPSI*SINPHI  ENG(3,3) * COSPSI*COSPHI  RETURN	30		
DCM(1,1) = COSPSI+COSTHE DCM(2,1) = -SINTHE + COSPHI + DCM(3,1) = COSPSI+COSPHI + DCM(1,2) = COSPSI+SINPHI + DCM(1,2) = COSPHE + COSPHE + DCM(3,2) = -SINPHI + COSFHE + DCM(3,2) = -SINPHI + COSFHE + DCM(2,3) = -COSPSI+SINPHI DCM(3,3) = COSPSI+SINPHI DCM(3,3) = COSPSI+COSPHI RETURN			
DCM(2,1) = -SINTHE*COSPHI + DCM(3,1) = SINTHE*SINPHI + DCM(1,2) = COSPSI*SINTHE DCM(2,2) = COSPSI*SINTHE DCM(3,2) = -SINPHI*COSTHE + DCM(1,3) = -SINPHI*COSTHE + DCM(2,3) = COSPSI*SINPHI DCM(3,3) = COSPSI*COSPHI RETURN END		֓֝֞֜֜֜֜֝֓֜֜֝֓֜֜֜֜֝֓֓֓֓֓֜֜֜֜֝֓֓֓֡֓֜֜֝֓֡֓֜֜֡֡֡֡֓֜֜֝	
DCM(3,1) = SINTHE *SINPHI + DCM(1,2) = COSPSI *SINPHI + DCM(2,2) = COSTHE *COSPHI + DCM(3,2) = -SINPHI *COSTHE + DCM(1,3) = -SINPHI *COSTHE + DCM(2,3) = COSPSI *SINPHI DCM(3,3) = COSPSI *COSPHI RETURN END		= -SINIHE-COSPHI +	
DCM(1,2) = COSPSI+SINTHE DCM(2,2) = COSTHE+COSPHI+ DCM(3,2) = -SINPHI+COSTHE+ DCM(1,3) = CSINPHI+COSTHE+ DCM(2,3) = COSPSI+SINPHI+ DCM(3,3) = COSPSI+COSPHI RETURN END	35	* SINTHE+SINPHI +	
DCM(2,2) = COSTHE *COSPHI + DCM(3,2) = -SINPHI *COSTHE + DCM(1,3) = -SINPHI *COSTHE + DCM(2,3) = COSPSI *SINPHI DCM(3,3) = COSPSI *COSPHI RETURN END		COSPSI+SINTHE	
DCM(3.2) = -SINPHI+COSTHE + DCM(1.3) = -SINPSI DCM(2.3) = COSPSI+SINPHI DCM(3.3) = COSPSI+COSPHI RETURN END		COSTHE+COSPHI +	
DCM(1,3)= - DCM(2,3)= DCM(3,3)= RETURN END		* -SINPHI+COSTHE +	
DCM(2,3)= DCM(3,3)= RETURN END	(	1	
	Ç		
END			
END		A C L C K N	
		END	

PAGE

SUBROUTINE INTOUA (DCM,Q)

```
DIMENSION Q(4), S(4), DCM(3,3), A(3,3)
DESCRIPTION - LEVEL 4
FUNCTION - COMPUTES INITIAL NORMALIZED QUATERNIONS
METHOD - USES DIRECTION COSINE MATRIX PASSED BY CALLING ROUTINE
- SEE "FACTORED COMPLEX QUATERNIONS", FAAC REPORT NO.
FR 3689/2557, PAGES 23-26
                                                                                                                                                                                                                                                                                       Q - EQUAL TO QUATERN(I) PASSED IN SUBROUTINE CALL DCM - EQUAL TO DIRECTION COSINE MATRIX PASSED IN SUBR. CALL
                                                                                                                                                                                                                                                                                                                                                                                                                                       C REVERSE SIGN IN THE OTHER TWO COLUMNS
                                                                                                                                                                                                                                                                                                                                                                                                                            က
                                                                                                                                                                                                                                                                                                                                                                                                                            IF ((A(3,3),GL,A(1,1)),AND,(A(3,3),GL,A(2,2))) L =
                                                                                                                                                                                                                                                                                                                                  S(1) = 0.5 + SORT(ABS(1.0 + A(1.1) + A(2.2) + A(3.3))
                                                                                                                                                                                                                                                                                                                                                                                                       .GT. A(3,3))) L
                                                                                                                                                                                                                                                                                                                                                                                                      IF ((A(2,2) GT A(1,1)) AND (A(2,2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S(2) = (A(2,3) - A(3,2))/FS

S(3) = (A(3,1) - A(1,3))/FS

S(4) = (A(1,2) - A(2,1))/FS
                                                                                                                         NON-COMMON VARIABLES DEFINED:
                                                                                                                                                            POTENTIAL ERROR CONDITIONS: NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DO 75 J = 1,3
IF (J .EQ. L) GOTO 75
                                                                                          INITES
                                                                                                                                                                                                                               DD 10 1=1,3
DD 10 J*1,3
A(I,J)* DCM(I,J)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A(1, U) = -A(1, U)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FS = 4.0 + S(1)
                                                                                                                NONF
                                                                               CALLED BY:
                                                                                                      CALLS
                                                                 COMUNICATIONS
                                                                                                                                                                                                                                                                                                                         25 CONTINUE
                                                                                                                                                                                                                                                                 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GDTO 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                  ō
                                                                                                                            000000
  00000000000
                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                                                                                     ں
                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ပ
                                                                                           9
                                                                                                                                                   5
                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

```
68
83/11/07. 09.41.53
FIN 4.6+428
                                                                                      0 CONTINUE

1f (L .GT. 1) G010 200

Q(1) * $(2)

Q(2) * -5(1)

Q(3) * 5(4)

Q(4) * -5(3)

RETURN
                                                                                                                                                      0 CONTINUE

1F (L. GT. 2) G0T0 250

0(1) = $(3)

0(2) = -$(4)

0(3) = -$(1)

0(4) = $(2)

RETURN
                       IF (L .GT. 0) GOTD 150
Q(1) = $(1)
Q(2) = $(2)
Q(3) = $(3)
Q(4) = $(4)
RETURN
 74/74 OPT=1
                                                                                                                                                                                                                     0(1) = S(4)
0(2) = S(3)
0(3) = -S(2)
0(4) = -S(1)
                                                                                                                                                                                                                                                                     RE TURN
END
  SUBROUTINE INIQUA
                                                                                                                                                       500
                                                                                                                                                                                                                      250
                                                                                         150
                                                                                                                                                ں
                                                                                                                                                                                                               ပ
                                                                                O
                                                                                                                                                                                                                                                              O
                                ပ
                                         9
                                                                                                                        6
                                                                                 65
                                                                                                                                                               16
                                                                                                                                                                                                      80
                                                                                                                                                                                                                                             85
```

FUNCTION -
C METHOD - CALLS FUNCTION SUBROUTINES IDIRMIX AND MATRIX WITH C APPROPRIATE PARAMETERS TO SET UP THE FOLLOWING TRANS- C FORMATION MATRICES: C FORMATION MATRICES:
DCMRA - AIRCRAFT C.S. TO RAIL C.S. DCMSA - AIRCRAFT C.S. TO SEAT C.S. DCMSR - RAIL C.S. TO SEAT C.S. DCMSE - EARTH-FIXED C.S. TO SEAT C.S. DCMIS - SEAT C.S. TO TVC C.S.
C DCMET - EARTH-FIXED C.S. 10 TVC C.S. CALLS FUNCTION SUBROUTINE INIQUA WITH APPROPRIATE C PARAMETERS TO SET UP THE QUATERNION ARRAYS USED TO C UPDATE THE SEAT/OCCUPANTAND AIRCRAFT TRAJECTORIES. C COMMUNICATIONS
C CALLED BY: C CALLS: C CALLS: C TDIRMIX C MATDIX
NON-COMMO VARIA PSISR - RO
C THETA ) C PHI ) EULER ANGLES FOR CALL TO INITIALIZE QUATERNIONS C PSI ) C POTENTIAL ERROR CONDITIONS - C POTENTIAL ONE
SECTION 4
ZPOS XTAIL , VTAIL , ZTAIL , V PITCH ROLL , RVEL , QVEL , P WINDX , WINDY , WINDZ , XACVEL , C DENSITY , NPTSART, AAT(4,50), NPTSLAT,
C SECTION 7 COMMON BLOCK C SECTION 7 COMMON BLOCK C***********************************
RRE YPOSRRE ZPOSRRE . LRE YPOSLRE . ZPOSLRE . SB(6), YPOSSB(6), ZPOSSB(6) . MUSB . MUSB

```
PAGE
83/11/07, 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C SET UP TRANSFORMATION MATRICES
C CALL IDIRMIX(DCMRE, FOLL, PITCH, YAW)
CALL IDIRMIX(DCMRA, O.O. RAILANG, O.O.)
CALL IDIRMIX(DCMRA, O.O. PSISA, THESA)
PSISR # PSISA - RAILANG
CALL IDIRMIX(DCMSR, O.O.)
FSISR # PSISA - RAILANG
CALL MATRIX(DCMSR, O.O.)
IF (IVC. EQ. O.) GO TO 200
CALL IDIRMIX(DCMTS, DCMSE, I)
CALL MATRIX(DCMTS, MPHI, MPSI, MTHE)
CALL MATRIX(DCMTS, DCMSE, DCMTE, I)
                                                                                                                             C SECTION 12 COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                C INTEGRATION ROUTINE COMMON BLOCK
                                                                                                                                                                                                               C THRUST VECTOR CONTROL VARIABLES COMMON BLOCK
              . RKICMND(3).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +-DCMTE(1,3)/(SQRT(DCMTE(1,1)+DCMTE(1,1)+DCMTE(1,2)+DCMTE(1,2)+
+DCMTE(1,3)+DCMTE(1,3)))
                                                                                                                                                                                                                                                                                                                                                                                        TRAJCH(97,3)
QUATSO(65)
QUATAC(65)
                                                                                                                                                                                                                                                                                                                                                                        , TRAUSO(193)
 FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                    . IRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKPASSX
                                                                                                                                                                                                                                                                      CDMMDN /MATRIX / DCMAE(3,3) . DCMRA(3,3) . DCMSA(3,3) . DCMIS(3,3) . DCMIS(3,3) . DCMIS(3,3) . DCMIE(3,3) . DCMGAE(3,3) . DCMGAE(3,3) . DCMGAE(3,3) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPY I tX
                                                                                                                                                                       COMMON /ITVCIN / ITVC . MPHI . MPSI . MTHE . ROLLRL . PITCHRL, SMPLRAT, TVCDLAY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , 03(3)
, C31
                                                                                                                                                                                                                                                                                                                                                                                     TRAJDA(193)
TVCEQS(225)
                                                                                                                                                                                                                                                                                                                                                                                                                    QUATOA (65)
                                                                                                                                                                                                                                                                                                                                                                         COMMON /RKUTTA / TIME , TIMES , DELTAT TRAJOSE(193) , TRAJOSE(
                                                                                                                                                                                                                                                                                                                                                                                                                                    IPCPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IYPRIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1KSUMX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ICYLIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPVIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 1 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11VCFLG , CMPVAL
C29 , C30
DTH(3,2) , ANGR(3)
                                                                                                                                                                                                                                                                                                                                                                                                       TRAUAC( 193)
                                                                                                                                                                                                                                                                                                                                                                                                                       QUA 7 SA (65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IY13X
IYPRI2X
                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPDINTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMON/IVCVRB / IIVCFLG
                                                                                                                                                                                                                                                                                                                                                                                                                                    INTSTP
                                                                                                                                                                                                      RKANG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ICVIX
 0PT=1
                                                                                                                                                                                                                                              C MATRIX COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DO 100 I=1,3
 74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 CONTINUE
  SUBROUTINE INITMS
                                                                       9
                                                                                                                                             65
                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                               80
                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

92 PAGE 83/11/07. 09.41.53 C SET UP QUATERNIONS

C CONTINUE

COLL INIQUA(DCMSE, QUATSQ(2))

QUATSQ(1) = 4.

RETURN

END FTN 4.6+428 74/74 OPT=1 SUBROUTINE INITMS

1.5

09 41.53

83/11/07

FTN 4 6+428

0PT = 1

74/74

SUBROUTINE INITRAJ

IACSFLG

.URZ(6)

.URY(6)

REFLNSA . URX(6)

COMMON /MOMARMS / +REFLNSO .REFLNDA

**1**0

DENSITY, NPISAAT, AAT(4.50), NPTSLAT, LAT(4.50).

MINDZ .

VINDY

P11CH WINDX

ဂ္ဂ

QVEL , PVEL XACVEL , CKPITHT

9

88 69 74 69 68 St. O 52

XXXX XXXXX
8
* I #
- #
# # # # # # # # # # # # # # # # # # #
* * * * * * * * * * * * * * * * * * *
# W # + + W + + W + + W + + W + + W + + W + + W + + W + + W + + W + + W + + W + + W + + W
# W # + W #
* * * * * * * * * * * * * * * * * * *
# W # + W + W + W + W + W + W + W + W +
* S * * * * * * * * * * * * * * * * * *
6 N 6 + M 4
# U # + U #
* W *
# U + + U + U + + U + U + + U + U + + U + U + + U +
• S • • • • • • • • • • • • • • • • • •
* H #
- S S + + + + + + + + + + + + + + + + +
• H *
•
•
S S + + + + + + + + + + + + + + + + + +
* H #
* S E T *
* * * * * * * * * * * * * * * * * * *
***
***
* F #
+ C +
***
* * * *
* * * *
***
SET
SET
SET
SET
٠
TRAJAC(3) # YPOS
XPOS YPOS

06 26 00 10 011

PAGE

83/11/07 09.41 53

FTN 4.6+428

74/74

SUBROUTINE INITRAJ

74/74 OPI=1

SUBROUTINE INITRAJ

175

TVEL \* SORT(XVEL\*XVEL + YVEL\*YVEL + ZVEL\*ZVEL)
CALL ZLININT(TVEL, RECOVDT, NPTSROT, 25, TROPLOY, 2)
200 CONTINUE
RETJRN
END

COMMON / ISETIOC / FOUNDAMEN BLOCK  COMMON / ISETIOC / FOUNDAMEN COMMON / ISETIOC / INVEST COMMON / INVEST C	COMMON / ISEATOC / ICCNIL XCGSO YCGGO ZGGSO TXXSO TXXS	COMMON / ISEATOC / ICCOLL XCGGO   YCGGO   ZCGGO   TXXGO    11XXGO   XXXGO   YCGGO   YCGGO   YXXGO    11XXGO   XXXGO   YCGGO   YXXGO   YXXGO    11XXGO   XXXGO   YXXGO   YXXGO   YXXGO    11XXGO   XXXGO   XXXGO   YXXGO   YXXGO    11XXGO   XXXGO   XXXGO   XXXGO   YXXGO    11XXGO   XXXGO   XXXGO   XXXGO   YXXGO    11XXG   XXXGO   XXXGO   XXXGO   YXXGO    11XXG   XXXG   XXXG   XXXG   XXXG   XXXG    11XXG   XXXG   XXXG   XXXG    1		RKALPH(6). RKNPTS	RKBETA(6),	6), RKGA	RKGAMA(6), F	RKTHRST(2,25,6	.25,6)
COMMON / ISEATIC / IPCNIL XCGSG	COMMON / ISEATOC / IDCNIL XCGSG 1 YCGGG 2 ZGGSG 1 XXXSG   1XXSG   1XXS	C SECTION 5 COMMON /ISEATOC / IDCNIT, XCGGO 1 17520 177500 17750 177500 177500 177500 17750 17750 177500 177500 177500 17750 17750 17750 17750 17750 1	+ 1/2	JCK					
TYSO	HEAL	TANDER   T	/ DDIVER   VISEA   COMMON   15EA   COMMON   VISEA   COMMON   COMMO			YCGSD	zceso	IXXSO	: .
### ##################################	### ### ### ### #### #################	TANA	•			IYYSO .	08241		
### ### ##############################	TZZD	TYTO	+ 4	•	⋖	WGHTOAB.	WGHTOA		
### FEAL	### 1720   1720	### 1250   1XYSO   1XYSO   1YYSO   1YY	•		CGOA	YCGOA	ZCGOA		
17250   1720A   1720A   1720A   1720A   1740A   1740	TIZEGO   TIXAA   TIXOA   TIX	C SECTION 5 COMMON BLOCK  C SECTION 5 COMMON BLOCK  C COMMON / ISETALN / SOSSAP PODSSAP PODSSAP PODSSAP PODSSAP A PO	REAL		(YSO)	IXZSO ,	IYYSO	17250	
C SECTION 5 COMMON BLOCK C SECTION 5 COMMON PLOCK C MATRAS HGHTSA WOHTSA FYOSSOS 1 TYSSA 1	C SECTION 5 COMMON PLOCK  C MATRIX COMMON PLOCK  C C MATRIX COMMON MATRIX ( DOCHAE(3, 3) DCMAE(3, 3) DCMAE(3	C SECTION 5 COMMON /1SETALN / XPOSSRP , YPOSSRP , XCGSA ; YCGSA   YCCSA   YCCS	+	•	. AOX	IXVOA .	IXZOA	. IYYDA	
C SECTION 5 COMMON BLOCK  C COMMON / ISETALN / XPOSSRP, YPOSSRP, XCGSA , YCGSA , YCGCL(3) , YCCCL(3) , YCGCL(3) , YCGCL(3) , YCGCCL(3) , YCGCCL(3) , YCGCCL(3) , YCGCCL(3) , YCGCCCC , YCGCA , YCGCCL(3) , YCGCCCC , YCGCA , YCGCCCA , YCGCCCC , YCGCCCC , YCGCCCC , YCCCCCC , YCCCCCC , YCCCCCCCCCC	C SECTION 5 COMMON BLOCK  C C SECTION 5 COMMON NELOCK  C COMMON /ISETALN / XPOSSRP, XPOSSRP, XCGSA , YCGSA	COMMON / ISETALN / XPDSSRP , YPDSSRP , XCGSA , YCGSA	•	•					
COMMON / 15ETALN / XDOSSRP, YDOSSRP, XDOSSRP, XCGSA / YCGSA / YCCSA /	COMMON / 1SETALN / XPOSSRP ZOGSA IXYSA IXZSA IYYSA ZOGSA X XCGSA X YCGSA ZOGSA X XCGSA X XCGSA X YCGSA ZOGSA X XCGSA X XCCC X XCGSA X XCCC X XCGSA X XCCC X XC	COMMON / 1SETALN / XPOSSRP, 2005SRP, XCGSA / YCGSA / ZCGSA / XXSA / IXYSA / IXZSA / IYYSA / IXSA / IYYSA / IXSA / IYYSA / IXSA / IYYSA / IXSSA / IYYSA IYYSA / IYYSA IYYSA / IYYSA IYYSA / IYYSA / IYYSA / IYYSA / IYYSA IYYSA / IYYSA IYYSA / IYYSA		•	•	•	•		•
COMMON /15E7ALN / XPOSSRP, YPOSSRP, ZPOSSRP, YCGSA , YCGSA , 17X5A 11X5A	COMMON /1SETALN / XPOSSRP, YPOSSRP, XCGSA , YCGSA , IXXSA , IX	COMMON /1SETALN / XPDSSRP, YPDSSRP, XCGSA , YCGSA , 1725A , 17		***********	******	********	******		*****
1758A   1758A   1745A   1745	The state	1255A   1175A   1175	COMMON /ISETALN /	/ XPOSSRP, YF	OSSRP.	ZPOSSRP.	XCGSA	, YCGSA	•
### AREASA   122SA   PHISA   PRISA   ### AREASA   HANSA   PROSSGS   2POSSGOT   #### AREASA   HANSA   HANSA   HANSA   #### AREASA   HANSA   HANSA   HANSA   ####################################	### ##################################	### AREA   1725A   1225A   1725A   172	+	ZCGSA		IXYSA	IXZSA	IYYSA	
### PREASA HGHTSA WGHTSA WFDSBOT, YPDSBOT, YPDSSCS, PREAL INXSA ITXSA IT	### ### ##############################	### PERAL   1785A   HOHISA   WOMERA   PROSECT	+	•	ZZSA ,	PHISA .	PSISA	. THE SA	
PEAL   IXXSA , IXYSA , IXYSA , IYYSA , IYYSA , IXXSA , IYYSA , IXXSA , IXXSA , IYYSA , IXXSA , IYYSA , IXXSA , IYYSA , IXXSA , IXXSA , IYYSA , IXXSA , IYYSA , IXXSA , IYYSA , IXXSA , IXXXX	PEAL   IXXSA   IXXSA   IXYSA   IYYSA   IYYSA   IYYSA   IXXSA   IXXSA   IXXSA   IXXSA   IXXSA   IXXSA   IXXSA   IXXSA   IXXSA   IXYSA   IXXSA   IXYSA   IXXSA	Tarsa   Tarsa   Tarsa   Tarsa   Tarsa   Tarsa	•		SHTSA .	WGHTSA .	XPOSBO		
C	Common   Matrix   M	C MATRIX COMMON /MATRIX / DOMAE(3,3) DOMAE(3,3,3) DOMAE(3,3,3,3) DOMAE(3,3,3,3,3) DOMAE(3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,	•		onsses.	YPOSSCS.	ZPOSSC	ıs	
C MATRIX COMMON BLOCK C COMMON / MATRIX / DCMAE(3,3) , DCMRA(3,3) , DCMSA(3,3) , DCMSR(3,3) , DCMSCR(3,3) , DCMSR(3,3) , DCMSCR(3,3) , DCMSCR(3,3,3) , DCMSCR(3,3,	C MATRIX COMMON BLOCK C C MATRIX COMMON BLOCK C C C MATRIX COMMON BLOCK C C C C C C C C C C C C C C C C C C C	C MATRIX COMMON BLOCK C C MATRIX COMMON BLOCK C COMMON / MATRIX / DCMAE(3,3) , DCMSA(3,3) , DCMS	REAL		CYSA .	IXZSA .	IYYSA		
C MATRIX COMMON BLOCK C. COMMON / MATRIX / DCMAE(3,3) , DCMSA(3,3) , DCMSA(3,3) , DCMSA(3,3) , DCMSA(3,3) , DCMSA(3,3) , DCMSR(3,3) , DCMSE(3,3) , DCMSE(3,3) , DCMSE(3,3) , DCMSE(3,3) , DCMSR(3,3) , DCMSE(3,3) , D	C MATRIX COMMON BLOCK C. COMMON / MATRIX / DCMAE(3,3) , DCMTS(3,3) , DCMTS(3,3,3) , DCMTS(3,3,3) , DCMTS(3,3,3,3) , DCMTS(3,3,3,3,3,3) , DCMTS(3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,	C MATRIX CDMMON BLOCK C COMMON / MATRIX / DCMSE(3,3) , DCMSE(3,3,3) , DCMSE(3,3,3) , DCMSE(3,3,3) , DCMSE(3,3,3) , DCMSE(3,3,3) , DCMSE(3,3,3) , DCMSE(3,3,3,3) , DCMSE(3,3,3,3,3,3) , DCMSE(3,3,3,3,3,3,3) , DCMSE(3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,	+	122SA					
COMMON /MATRIX / DCMAE(3.3) . DCMRA(3.3) . DCMRA(3.3) . DCMRAE(3.3) . DCMAE(3.3) . INPRINT (3.1) . MAXENT . HEADVEL . LU .	COMMON /MATRIX / DCMAE(3,3) DCMTS(3,3) DCMTS(3,3) DCMS(3,3) DCMS(3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3) DCMS(3,3,3,3,3) DCMS(3,3,3,3,3,3,3) DCMS(3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,	COMMON / MATRIX / DCMAE(3,3) , DCMSA(3,3) , DCMSA(3,3) , DCMSE(3,3) , DCMSE(3,3,3) , DCMSE(3,3,3,3) , DCMSE(3,3,3,3	Ceeeeeeeeeeeeeeeeeee	***	*				:
COMMON / MATRIX / DCMAE(3,3) , DCMTE(3,3) , COMTE(3,3) , COMSR(3,3) , COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C MATRIALS   LINEADALT   HEADVEL   HEA	COMMON / MATRIX / DCMAE(3,3) DCMRA(3,3) .  + DCMASE(3,3) DCMAE(3,3) DCMSR(3,3) .  C. MISCELLANEOUS DATA COMMON BLOCK  C. MISCELLANEOUS DATA COMMON MAXED MAXED MAXENT  + HEADER MAXENTE MAXENT  + HEADER HEADER HEADER LU  + HEADER HEADER HEADER HEADER LU  + HEADER HEADER HEADER HEADER LU  + HEADER HEADER HEADER LU  + HEADER HEADER LU  + HEA	COMMON /MATRIX / DCMAE(3,3) DCMTE(3,3) . DCMSE(3,3) . DCM		:	*****	••••••	• • • • • • •	• • • • • • • • • • • • • • • • • • • •	*****
+ DCMSE(3,3), DCMTS(3,3), DCMTE(3,3), DCMSR(3,3), DCMSR(3,3,3), DCMSR(3,3,3), DCMSR(3,3,3), DCMSR(3,3,3), DCMSR(3,3,3,3), DCMSR(3,3,3,3), DCMSR(3,3,3,3), DCMSR(3,3,3,3), DCMSR(3,3,3,3,3), DCMSR(3,3,3,3,3), DCMSR(3,3,3,3,3,3), DCMSR(3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3,	+ DCMSE(3,3), DCMTE(3,3), DCMTE(3,3), DCMSR(3,3), DCMOMING(3,3), DCMOMING(3,3, DCMOMING(3,3	+ DCMSE(3,3), DCMTE(3,3), DCMTE(3,3), DCMSE(3,3), DCMSE(3,3), DCMSE(3,3), DCMOMICS.  C MISCELLANEDUS DATA COMMON BLOCK  C MISCELLANEDUS DATA COMMON BLOCK  C C MISCELLANEDUS DATA COMMON BLOCK  C C MAXLINE  + HEADER  +	COMMON /MATRIX /	DCMAE(3,3)		•	DCMSA (3	. 3)	
DCMDUM(3,3)  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C COMMON /MISC / IPAGECT(31) , IPRTCNT(31) , IPRTCNT(32) , ITMES(38) , IPRTCNT(31) , SACCEL(31) , VACCEL(31) , VACCEL(3	DCMDUM(3,3), DCMORE(3,3), DCMSR(3,3),  C. H. C.	COMMON / MISC / IPAGECT(31), DCMORE(3,3), DCMSR(3,3), DCMOUN(3,3), DATA COMMON / MISC / IPAGECT(31), LINECT(31), IPATCNT(31), DATE / HEADET / HATTINDX / HAT	+	DCMSE (3,3)			DCMTE (3	.3)	
C MISCELLANEOUS DATA COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C C MISCELLANEOUS DATA COMMON BLOCK C C C C C C C C C C C C C C C C C C C	C MISCELLANEOUS DATA COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C C MISCELLANEOUS DATA COMMON BLOCK C C C C C C C C C C C C C C C C C C C	C MISCELLANEUUS DATA COMMON BLOCK C MISCELLANEUUS DATA COMMON BLOCK C C C C C C C C C C C C C C C C C C C	•	DCMSAE (3,3)			DCMSR (3	. 3)	
C MISCELLANEDUS DATA COMMON BLOCK C.COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) ,  HAZLINE , MAXENT , MAXENT ,  HAZLINE , HEADALT , HEADVEL ,  HEADSR , HEADMAT , HEADPIT ,  HEADSR , HEADWAT , HEADVIT ,  HEADFELS , IEVENTS(38) , TIMES(38) ,  HEADFELS , PRTINDX , PRZVEL ,  YACCEL(3) , YACCEL(3) , YACCEL(3) ,  HAZLINGT , PRTINDX , PRZVEL ,  YACCEL(3) , YACCEL(3) , ZACCEL(3) ,  CCOMMON BLOCK ,  COMMON / MOMARMS / COMMON RELUXA , URX(6) , URZ(6) ,  **SSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), YSSORK(6), ZSSORK(6), CASCORM(6), C	C MISCELLANEDUS DATA COMMON BLOCK C.COMMON /WISC / IPAGECT(31) , LINECT(31) , IPATCNT(31) + HANCINE	C MISCELLAMEDUS DATA COMMON BLOCK C. CDMMON /MISC / IPAGECT(31) LINECT(31) IPRTCNT(31) + HEADER   MAXLINE   MAXREDT   MAXEVNT   + HEADER   HEADALT   HEADVEL   + HEADROL   HEADVAM   HEADPIT   + HEADROL   HEADVAM   HEADVIT   + HEADVAM   HOWARNS (2)   YACCEL(3)   YACCE	+	DCMOOM(3,3)	-			•	•
COMMON / MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) , LINECT(31) , IPRTCNT(31) , LINECTNT(31) , LOTE	COMMON / MISC / IPAGECT(31) , LINECT(31) , IPATCNT(31)    **MAXENT	COMMON /MISC / IPAGECT(31) , IPRTCNT(31) , IPRTCNT(31) , IERFLG	C MISCELLANEDUS DATA CO	MMON BLOCK					•
COMMON / MASC / IPAGECI(31) , LINECICATI , IPATEDNICATION (31) , LINECICATION (31) , LINECICATION (31) , LINECICATION (31) , LOUEL	COMMON / MISC / IPARCI(31) , IPARINAL IN MAXELINE , MARREPT , IPARINAL ST.   IPARCINI	CDMMON / MISC / IFAGECI(31) , LINECICSI) , IFRICNICSI) , IFRICNICSI) , IFRICNICSI) , IFRICNICSI) , IFRICNICSI , IERREG	***************************************		* * * * * * * * * * * * * * * * * * * *	*****	:	********	* * * * * *
HANDER   MAXREPT   MAXEVNT	MAXEINE   MAXERPT   MAXEVNT	HEADER   HEADER   MAXEENT   MAXEENT	COMMON /MISC /	IPAGECT (31	•	NECTABL	-	~	•
FEVERFLG	+ 1EVLINE   1ERRFLG   LU  + HADDALT   HEADVEL   + HEADSR   HEADVEL   + HEADSR   HEADVEL   + HEADROL   HEADWAT   HEADPIT   + HEADROL   HEADWAT   HEADPIT   + HEADROL   HEADWAT   HEADPIT   + HEADROL   HEADWAT   HEADPIT   + HEADROL   HEADWAT   HIMES (38)   TIMES (38)   + HEADROL   HIMDX   HAS (38)   HIMES (38)   + HEADROL   HADDOL   HAS (38)   HIMES   + HADDROL   HADDOL   HADDOL   HEADPIT   + HEADROL   HADDAL   HEADWAT   + HEADROL   HEADWAT   HEADROL   - HERTLND   HADDOL   + HEADROL   HEADWAT   + HEADROL   HEADWAT   + HEADROL   HEADWAT   + HEADROL   HEADWAT   - HEADROL   HEADROL   - HEADROL   HEADROL   - HEADROL   HEADWAT   - HEADWAT   - HEADROL   HEADWAT   - HEADROL   HEADWAT   - HEADROL   - HEADROL   - HEADWAT   - HEADROL   - HEADROL   - HEADWAT   - HEADWAT   - HEADWAT   - HEADROL   - HEADROL   - HEADROL   - HEADROL   - HEADWAT   - HEADROL   - HEADROL   - HEADROL   - HEADROL   - HEADWAT   - HEADWAT   - HEADWAT   - HEADWAT   - HEADROL   - HEADWAT   - HEADWAT   - HEADWAT   - HEADWAT   - HEADROL   - HEADWAT   - HEAD	TENTELG	*	MAXL INE	Ì.	IXREPT	Ì.	AXEVNT	•
+ HEADSR	HEADSE	+ HEADYEL  - PRIMGR 2)  - PRIMGR 3)  - PRIMGR 4)  - PRIMGR 3)  - PRIMGR 4)  - PRIMGR 4)  - PRIMGR 5)  - PRIMGR 5)  - PRIMGR 5)  - PRIMGR 6)  - PRIMGR 7)	*	I E VL I NE		RRFLG	<b>-</b>	·	•
+ HEADSR	+ HEADSR	HEADSR   HEADVAW   HEADVIT	*	IDATE	Ĭ.	ADALT	Ξ.	EADVEL	•
+ HEADROL  + REPTYPE(5,31) , PRILIGIT(2) , PRIMGHT(2) ,  + REPTYPE(5,31) , PRIMGHT(2) ,  + REPTYPE(24) , IMVDG , PRIMES(38) ,  + REVENTS(38) , TIMES(38) ,  - PRIMASS(2) , PRINDX , PRZVEL ,  - ACCEL(3) , YACCEL(3) , ZACIEL(3) ,  - TACCEL(3) , YACCEL(3) , DRILINGT ,  - PRIMGHT , PRIMASS , PRILINGT ,  - C MOMARMS COMMON BLOCK ,  - COMMON MLOCK ,  - COMMON	+ HEADROL HEADWGT BLAS  + REPTYPE(5,31) , PRTLNGT(2) , PRTWGHT(2) , PRTLNGT(2) , PRTLNGTT(2) , PRTLNGTT(2) , PRTLNGTT(2) , PRTLNGT CANDOL CAND	HEADROL   HEADWGT   BIAS   REPTYPE(5.31)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT(2)   PRTUNGT	•	HEADSR	Ξ.	ADYAW	₹	EADPIT	٠
+ REPTYPE(5,31), PRTLNGT(2), PRTWGHT(2) + IHEADER(24), IEVENTS(38), TIMES(38), + PRTMASS(2), PRTINDC, PRTEMP(2), + ZVECT(3), XYZ(3), SAVINE - XACCEL(3), YACCEL(3), ZACCEL(3)  INTEGER REPTYPE, BIAS, PRTLNGT + PRTWGHT, PRTMASS, PRTLNGT C MOMARMS COMMON BLOCK C COMMON NORDERS (1000), URX(6), URX(6), URZ(6), CSSORK(6), ZSSORK(6), ZS	+ REPTYPE(5,31), PRTLNGT(2)  + TIMES(38), ITMES(38), TIMES(38)  + FRINDS PRIMASS(2), PRTINDS PREWP(2)  + XACCEL(3), XYZ(3), SAVIIME  - XACCEL(3), YACCEL(3), ZACCEL(3)  INTEGER REPTYPE BIAS PRTLNGT  - PRTLNGT PRTEMP PRTEMP  C MOMARMS COMMON BLOCK  C C C MOMARMS COMMON BLOCK  C C C C MOMARMS / REFLNSA , URX(6), URX(6), ZSSGCR(6), TSSGCR(6), ZSSGCR(6), ZSSGCR(6), ZSSGLRE C SSGCR(6), XSSGRR(6), ZSSGLRE C SSGCR(6), ZSSGLRE C SSGCRE C SSG	+ REPTYPE(5,31), PRILNGT(2), PRIWGH1(2),  + IHEADER(24), IEVENTS(38), TIMES(38),  + PRIMASS(2), YAZ(3), PRILNDX, PRINGEL  - XACCEL(3), YAZ(3), XAZ(EL(3), YAZ(21), YA	•	HEADROL		ADWGT	<b>6</b>	IAS	٠
+ IHEADER(24) , IEVENTS(38) , TIMES(38) , TAMES(38) , PRITINDX , TAMES , TAME	HEADER(24)   IEVENTS(38)   TIMES(38)	HEADER(24)   IEVENTS(38)   TIMES(38)	+	REPTYPE (5,		ZTLNGT (2)	•	RIMGHT(2)	•
MANDC   PRIEMP(2)   PRIEMP(2)   PRIEMP(2)   PRIMDX   PRZVEL   PRZVEL   YACCEL(3)   YYZ(3)   SAVIME   YACCEL(3)	HNVDC	HWDC	•	IHEADER(24)		š	•	IMES (38)	•
+ TVECT(3) , TYAZ(3) , PRZVEL  - TVECT(3) , XYZ(3) , SAVIME	+ PRIMASS(2) , PRINDX , PKZVEL  ZVECT(3) , XYZ(3) , SAVIME  ***********************************	+ PRIMASS(2) , PRIINDX , PKZVEL  ZVECT(3) , XYZ(3) , SAVIIME , SAVIIME , XYZ(3) , YZCEL(3) , SAVIIME , YZCEL(3) , YZZCEL(3) , YZZCELE , YZCELE , YZZCELE	•			VDC	ā.		•
+ ZVECT(3) , XYZ(3) , SAVTIME , XACCEL(3) , YACCEL(3) , ZACCEL(3) , YACCEL(3) , ZACCEL(3) , YACCEL(3) , PRTLNGT , PRTLNGT , PRTLNGT , PRTLNGT , PRTLNGT , PRTLNGT , PRTLNDX COMMON BLOCK , PRTLNDX , C. COMMON /MOMARMS / C.	+ ZVECT(3) ; XYZ(3) ; SAVIIME   + XACCEL(3) ; YACCEL(3) ; ZACCEL(3)    INTEGER	+ ZVECT(3) , XYZ(3) , SAVIIME	•	PRIMASS(2)		TINDX	ā.	KZVEL	-
+ XACCEL(3) , YACCEL(3) , ZACCEL(3) + PRTWGHT , BIAS , PRTLNGT , PRTLNGT , PRTEMP , PRTEMP , PRTEMP , PRTMASS , PRTINDX	+ XACCEL(3) , YACCEL(3) , ZACCEL(3)  INTEGER REPTYPE , BIAS , PRTLNGT , PRTWGHT , PRTWASS , PRTINDX COMMON BLOCK C	+ XACCEL(3) , YACCEL(3) , ZACCEL(3) , PRILNGT + PRILNGT , BIAS , PRILNGT , PRILNGT + PRIEMP , PRIMASS , PRIINDX COMMON BLOCK , PRIEMP , PRIMASS , PRIINDX COMMON WOMARMS / REFLINSA , URX(6) , URZ(6) , + KSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), ZSSORK(6), TSSORK(6), TSSORK(	•	ZVECT(3)	×.	(2(3)	· S	AVIIME	•
INTEGER   REPTYPE   BIAS   PRTLNGT	INTEGER   REPTYPE   BIAS   PRTLNGT	INTEGER REPTYPE BRIAS PRILNGT  PRILNGT  C MOMARMS COMMON BLOCK  COMMON MOMARMS /  CHARLASO REFLNSA URX(6) URZ(6)  +XSSOCA(2) YSSOCA(2) ZSSOCA(2) XSSORK(6) ZSSORK(6).  +XSSORRE YSSOCRE ZSSOCRE XSSOLRE ZSSOLRE	+	XACCEL(3)	7	CCEL(3)	7	ACCEL(3)	
+ PRIEMP , PRIMASS , PRIINDX C	+ PRTEMP	+ PRITMGHT , PRITMASS , PRIINDX C************************************	INTEGER	REPTYPE			ā.	RICNGT	•
C	C MOMARMS COMMON BLOCK C	C	•	PRINCHT			•		
C MOMARMS COMMON BLOCK C COMMON / MOMARMS / COMMON / MOMARMS / COMMON / MOMARMS / COMMON / REFLNSA . URX(6) . URX(6) . URZ(6) . CSSOCA(2).YSSOCA(2).XSSORK(6).YSSORK(6).ZSSORK(6).	C MOMARMS COMMON BLOCK C COMMON / MOMARMS / COMMON	C	. +	PRIEMP		THASS	ā.	RIINDX	
C	C. MUMARKAS COMMON BLOCK C. COMMON / MOMARKAS / + REFLNSO . REFLNSA . URX(6) . URY(8) . URZ(6) . + KSSOCA(2).YSSOCA(2).XSSORK(6).YSSORK(6).ZSSORK(6). + KSYODA . ZSSOCA(2).ZSSOCA(2).ZSSORK(6).	C.************************************	Constant of the second of the			• • • • • • • • • • • • • • • • • • • •	:	••••••	::
CDMMON /MDMARMS / +REFLNSA .URX(6) .URY(6) .URZ(6) , +XEFLNSO .REFLNSA .URX(6) .VSSORK(6).ZSSORK(6).	CDMMON /MOMARMS / +REFLNSO .REFLNDA .REFLNSA .URX(6) .URX(6) ,URZ(6) , +XSSOCA(2),YSSDCA(2),ZSSOCA(2),XSSDRK(6),YSSORK(6), ZSSORK(6), +XSSOCA(2),YSSOCA(2),ZSSOCA(2),XSSORK(6),YSSORK(6),	CDMMON / MOMARRWS / +REFLNSA .URX(6) .URY(8) .URZ(6) , +XSSOCA(2).YSSOCA(2).ZSSOCA(2).XSSORK(6).YSSORK(6).ZSSORK(6). +XSSORRE .YSSORRE .ZSSORRE .XSSORRE .ZSSORRE .	C MUMAKES CUMMON BLUCK			*****	*****		•
+REFLNSO , REFLNDA , REFLNSA , URY(6) , URY(6) , URZ(6) , +XSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), YSSORK(6), ZSSORK(6),	+REFLNSO , REFLNDA , REFLNSA , URX(6) , URY(8) , URZ(6) , +XSSOCA(2), YSSOCA(2), ZSSOCA(6), XSSORK(6), ZSSORK(6), +XSSOCA(2), ZSSORRE , ZSSORRE , XSSOLRE , ZSSOLRE	+REFLNSO , REFLNDA , REFLNSA , URX(6) , URY(8) , URZ(6) , +XSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), YSSORK(6), ZSSORK(6), +XSSORRE , ZSSORRE ,	CDMMON /MOMARMS /						
+XSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), YSSORK(6), ZSSORK(6),	+XSSOCA(2),YSSOCA(2),ZSSOCA(3),XSSORK(6),YSSORK(6),ZSSORK(6), +xc <ndaf td="" xssorre="" yssorre="" zssorre="" zssorre<=""><td>+XSSOCA(2),YSSOCA(2),ZSSOCA(2),XSSORK(6),YSSORK(6),ZSSORK(6), +XSSORRE ,YSSORRE ,ZSSORRE ,XSSOLRE ,YSSOLRE ,</td><td>+REFLNSO , REFLNDA</td><td>I REFLINSA</td><td>.URX(6)</td><td>JARY (</td><td>ň. (9</td><td>32(6)</td><td></td></ndaf>	+XSSOCA(2),YSSOCA(2),ZSSOCA(2),XSSORK(6),YSSORK(6),ZSSORK(6), +XSSORRE ,YSSORRE ,ZSSORRE ,XSSOLRE ,YSSOLRE ,	+REFLNSO , REFLNDA	I REFLINSA	.URX(6)	JARY (	ň. (9	32(6)	
	+xccnaaf yccaage zccaage xscalae yccaage zscalae	+KSSORRE , YSSORRE , ZSSORRE , YSSOLRE , ZSSOLRE ,	+XSS0CA(2),YSSDCA(	(2), ZSSOCA(2)	.XSSOR	(6). YSSO	RK(6), 29	SSORK(6).	

		**************	*************
	COMMON /PARCHUT / IRECOV	, TRDPLOY	. RECOVLL .
130	+ RECDRAG	, RECOVPD	. POROSR .
1	+ XRECAP	. YRECAP	, ZRECAP
	+ NPTSRLS	, RECOVLS(2,25)	. IFTRECV .
	+ NPTSRFT	. RECOVF1(2,25)	, SEPFRCE ,
	+ IDROGUE	DRDRAG2	. DROGPD2
135	+ POR05D2	. VELCON	. IFTDR02 .
	+ NPTDFT2	, DROGF 12(2,25)	. IFTDRO1
	+ APTOF71	. DROGFT1(2,25)	IDROGLS .
	+ NPTSDLS	. DROGLS(2,25)	. TODPLOY .
	+ 015PLOY	DROGLL	, DRDRAG1
140	+ DROGPD 1	. POROSD1	. DROVELX .
	+ DROVELY	. DROVEL 2	. XDROGAP .
	+ YDROGAP	ZDROGAP	. CHALT1 .
	+ CHAL 12	, GLIMIT	, TDELAY .
	+ AREADC	WGHTDC	. TFP1
145	+ TFP2	TFP3	, TOROGLS ,
	2002	NPTSRDT	. RECOVDT(2,25)
	••••••••••	****************	
	C SET UP AERODYNAMIC REFERENCE LENGTHS	THS	
	***********	*********	*******
150	· U		
)	•		
	REFLNDA = SQRT(4.0+AREADA/PI)		
	REFLUSA = SORT(4.0.4REASA/PI)		

100 CONTINUE

C SET UP MOMENT ARMS (VECTORS FROM SEAT/OCCUPANT CG TO VARIOUS

C ATTACHMENT POINTS)

C C SET UP VECTORS FROM SEAT/OCCUPANT CG TO VARIOUS

C TOTACHMENT POINTS (VECTORS FROM SEAT/OCCUPANT CG TO EACH CATAPULT ATTACHMENT C POINT IN SCS

155

IF (INRKT EQ 0) GO TO 200 DO 100 I=1, INRKT URX(I) = COS(RKALPH(I)) URY(I) = COS(RKBETA(I)) URZ(I) = COS(RKGAMA(I))

	200 CONTINUE
175	IF (INCAT .EQ. 0) GQ TQ 210  DQ 201 I=1,INCAT  X\$SQCA(I)*XPG\$AP(I)-XCG\$O  Y\$SQCA(I)*YPQ\$AP(I)-YCG\$O  Z\$SQCA(I)*ZPG\$AP(I)-ZCG\$O
180	C SET UP VECTORS FROM SEAT/OCCUPANI CG TO EACH ROCKET ATTACHMENT POINT C IN SCS
	.EQ. 0) GO TO 1, INRKT = XPOSRK(1) - = YPOSRK(1) -
061	
195	220 CONTINUE ************************************
300	SEAT/OCCUPANT CG TO ORIGIN OF RCS ECT, XSSOMRE, XPOSSCS, DCMSR, O) -XCGSO
205	ZSSOMRE=ZSSOMRE-ZCGSO  C ***********************************
210	XSSOBOT = XSSOBOT - XCGSO YSSOBOT = YSSOBOT - YCGSO ZSOBOT = ZSSOBOT - ZCGSO C
215	
220	
225	C ASSUME INITIALLY THAT THERE IS A SLIDER BLOCK AT THE TOP OF THE SEAT C AND AT THE SEAT BOTTOM C C

<u>1</u>0

VSSASRP = YPOSSRP - YCGSA  ZSSASRP = ZPOSSRP - YCGSA  ZSSASRP = ZPOSSRP - ZGGSRP+HOHTSA  C ZRUDF CONTINUE  ZRCSAC = XPOSRRE  YRCSAC = XPOSRRE  ZRCSAC = ZPOSRRE  ZRCSAC = ZPOSRRE  ZRCSAC = ZPOSRRE  ZRL ROTATE (XRCSAC, XSRCSAC, XRCSAC, DCMSR, O)  C SET UP VECTOR FROM SOCG TO ACCG IN ECS  C CALL ROTATE (XRCSAC, XSSOAC, XCGSO, DCMSR, I)  C SET UP VECTOR FROM ACCG TO SOCG IN ACS  C CALL ROTATE (XRCSAC, XSSOAC, ZVECT, DCMSR, O)  C SET UP VECTOR FROM ACCG TO ACCG IN SCS  C CALL ROTATE (XRCSAC, XSSOAC, ZVECT, DCMSR, O)  C SET UP VECTOR FROM SOCG TO ACCG IN SCS  C CALL ROTATE (XRCSAC, XSSOAC, ZVECT, DCMSR, I)  XZZ (1) - XDR FROM SOCG TO ACCG IN SCS  C SET UP VECTOR FROM GRIGIN OF RAIL C S. TO DARI ATT, PTS IN GCS  C SET UP VECTOR FROM GRIGIN OF RAIL C S. TO DARI ATT, PTS IN GCS  C SET UP VECTOR FROM GRIGIN OF RAIL C S. TO DARI ATT, PTS IN GCS  C SET UP VECTOR FROM GRIGIN OF RAIL C S. TO DARI ATT, PTS IN GCS  C SET UP VECTOR FROM SATIOUCC C G TO DARI CONFLUENCE PTS. IN SCACH UP VECTOR FROM SATIOUCC C G TO DARI CONFLUENCE PTS. IN SCACH UP VECTOR FROM SATIOUCC C G TO DARI CONFLUENCE PTS. IN SCACH UP VECTOR FROM SATIOUCC C G TO DARI CONFLUENCE  Z SCOCPHIL-XDRTCPHII-XCGSO  Z SCOCPHII-XDRTCPHII-XCGSO  Z SCOCPHII-XCGSO  Z	CXSSASRP	ASRP " XPOSSRP - XCGSA
ā -		# YPOSSRP -
, and the second se		:
- Andrew Company of the Company of t		SET UP VECTOR FROM DRIGIN OF RCS TO A/C C.G. IN RCS
- And the state of		CSAC = KPOSRRE+YPOSLRE)/2. CSAC = (YPOSRRE+YPOSLRE)/2. CSAC = ZPOSRRE L ROTATE(ZVECT, KRRCSAC, KRRCSAC, DCMRA, O)
- Andrews - Andr		SET UP VECTOR FROM SOGG TO ACCG IN EFCS CALL ROTATE (XRRCSAC, XSSCSAC, XPOSSCS, DCMSR, 0) CALL ROTATE (XSSCSAC, XESOAC, XGSO, DCMSE, 1)
ā		SET UP VECTOR FROM ACCG TO SOCG IN ACS
ā		VECTOR FROM SOCG TO ACCG IN SCS  L ROTATE (XESDAC, XSSOAC, ZVECT, DCMSE, O)  E IS A DART SYSTEM, SET UP DART VECTORS
ā		IF (IDART .EG. 0) GD TO 9000 SET UP VECTOR FROM ORIGIN OF RAIL C.S. TO DART ATT. PTS IN RCS
ā	DD 26 XYZ( XYZ( XYZ( CALL CARDA	160 1=1,2 (1)=xDRTAP(1) (2)=vDRTAP(1) (3)=zDRTAP(1) - ROTATE (xyZ(1),xyZ(1), ZVECT, DCMSR,1) 3AP(1) = xyZ(1)+xPOSSCS
ā		JAP(1) = XYZ(2)+YPOSSCS  JAP(1) = XYZ(3)+ZPOSSCS  INUE
		INUE

-	SUBROUTINE INIVRBL	:	
ĸ	C DESCRIPTION LEVEL 3 C FUNCTION - INITIALIZES PROGRAM VARIABLES C METHOD - INITIALIZES FLAGS, PRINT VARIABLES, DEFAULT PARAMETERS C METHOD - INITIALIZES FLAGS, PRINT VARIABLES, DEFAULT PARAMETERS C FOR DYNAMIC C G, AND TUBE BENDING SIMULATION, MASSES, C GCCUPANT ALONE C G, (BASSED DN WEIGHT AND C G OF SEAT		
o,	COMMUNICATIONS		
ž.	CALLS NON-COMMON VAR NONE POTENFIAL ERRO	• • • • •	
20	CONSTANTS COMMON BLOCK	• • • • •	
255	RADDEG DE	: :	
30	+ PRESALT(3) DIEMP , RHOS . + TEMPS , VYWIND , VZWIND C	:•	
35	COMMON / DRIVRB / DRIVAL(2), DRIDERV(2), ACCEL1  DRIMAX TMAX  + ZACCMAX DRICON  CONTROL 13 COMMON BLOCK	• • •	
0 !	COMMON /DYNCGIN / IDYNCG , WY , WYY , CX , XSLACK , SXP , CZ , SY , SY , CZ , SY , SZNI , SZNI , SZNI	•	
î.	N BLOCK L(6) . CODERV(6), AO , YCGOAO .		
06	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	• • •	
<del>3</del> 2	COMMON /IAIRCRT / TEMP . PRESSUR, ZACVEL . XPOS . VPOS		

+ DENSITY, NPTSAAT, AAT(4,50), NPTSLAT,LAT(4,50), + IACSFLG
C SECTION 9 COMMON BLOCK
COMMON /ICATPLT / INCAT CATLNT(2), CATSTK(2),TCI (2).  + YPOSAP(2) YPOSAP(2), CATSTK(2), NPTSCT(2).
+ CATHRST(2,25,2), ITUBEND KTUBE CTUBE + PTUBE MUTUBE EXTLNGT ICATOUT REAL KTUBE
C SECTION I COMMON BLOCK
COMMON /ICONTRL / ISTART , ISTOP , ESTOP , IRESTRT, IUNITS ,
COMMON /IDELIAT / DIPHAS1, DIPHAS2  COMMON /IDELIAT / DIPHAS1, DIPHAS2  C. SECTION 7 COMMON BLOCK
C
REAL KXSB , MYSB C
C SECTION 10 COMMON BLOCK  C SECTION 10 COMMON BLOCK
COMMON /IROCKET / INRKI , RKDELY(6), RKNPTS(6), IROKOUT + RKIGN(6), RKWGHT(6), RKBURN(6), TSTAR(6), + XPOSRK(6), YPOSRK(6), ZPOSRK(6), + RKALPH(6), RKBETA(6), RKGAMA(6), RKTHRST(2,25,8) INTEGER RKNPTS
C INFOOA DATA (USED IN SUBROUTINE AEROIN) COMMON BLOCK C. CDMMON /INFOOA / NCXS(12) , NCYS(12) , NC
C SECTION 6 COMMON BLOCK
COMMON / ISEATOC / IPCNTL , XCGSO , YCGSO , ZCGSO , TXXSO , 1XYSO , 1XYSO , 1YZSO , 1ZZSO , AREADA , WGHTOAB, WGHTOAA , 1ZXOA , IXYOA , 1XYOA , XCGOA
REAL 1XX50 1XY50 1XZ50 1YY50 1Y250 .

1XX0A								
C SECTION 5 COMMON FIGURA  COMMON / ISETAL / XPOSSRP	115	+ +	12250 1720A	1XX0A . 1	IXYOA . IXZE	DA IVVOA		
COMMON VISETALN / XOGSSRP, XOSSRP, XOGSSR / YOGSA   YO		C SECTION 5 COMMON BLC	DCK					
TASA	120	COMMON /ISETALN /	XPOSSRP.		YYSA IXZ			
TXXSA   TXYSA   TXYSA   TXYSA   TYYSA   TYYS		<b>*</b> *						
REAL   IXXSA		•	<u>.</u>					
C SECTION 12 COMMON BLOCK  C COMMON / ITVC IN / ITVC  RRALL  RRALL  RRALL  RRALL  RRALL  RRALL  RRALL  RRALL  RASSOA1 MASSOA2 MASSOA2 MASSOA  MASSOA1 MASSOA2 MASSOA  RASSOA1 MASSOA2 MASSOA  RASSOA1 MASSOA2 MASSOA  RASSOA1 MASSOA2 MASSOA  RASSOA1 MASSOA MASSOA  RASSOA1 MASSOA MASSOA  RASSOA1 MASSOA MASSOA  RASSOA MASSOA  RASCOA  RAS	25		IXX5A .	IXYSA , 1	XZSA . IYY		-	
C COMMON / ITVCIN / TIVC MPHI MPSI MIHE  REAL MPHI MPSI MTHE  C MASSES COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES COMMON MISC / MASSEA MASSEA MASSEO MASSEO  C MISCELLANEOUS DATA COMMON BLOCK  C MASSEA MASSEA MASSEO MASSEO MASSEO  C MISCELLANEOUS DATA COMMON BLOCK  C MASSEA MASSEO MASSEO MASSEO MASSEO  C MASSEA MASSEO MASSEO MASSEO MASSEO  C MASSEA MASSEA MASSEO MASSEO MASSEO  C MISCELLANEOUS DATA COMMON BLOCK  C MASSEA MASSEA MASSEO MASSEO MASSEO  C MASSEA MASSEO MASSEO MASSEO MASSEO  C MASSEO MASSEO MASSEO MASSEO MASSEO  C MASSEO MASSEO MASSEO MASSEO MASSEO  C MASSEO MASS		C SECTION 12 COMMON BLC	OCK	•	•	:	•	
REAL   WP11   WP51   WT6EAT   TVCDLAY	30	Common ITVCIN	•	MPH!	TEST MITTE	•	:	
REAL   MPHI   MPS1   MHE   C			بريا	PITCHRL,	SMPLRAT, TVCE	SLAY.		
C MASSES COMMON BLOCK  C COMMON / MASSES		REAL	MPHI .	MPS1				
C COMMON /MASSES / MASSOA : MASSOD : MASSO : MASCO : M	35	C MASSES COMMON BLOCK	•	•	•	•	•	
### ### ### ### ### ### ### ### ### ##			٠	٠		• • • • • • • • • • • • • • • • • • • •	•	
C M SCELL ANEDUS DATA COMMON BLOCK C M SCELL ANEDUS DATA COMMON BLOCK C C M SCELL ANEDUS DATA COMMON BLOCK C C M SCELL ANEDUS DATA COMMON MISC / IPAGECT(31)		COMMON /MASSES / + REAL	MASSOA 1	MASSRK(		MASSO .		
C MISCELLANEOUS DATA COMMON BLOCK  CCOMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(	0	÷	MASSSA		MASSDC	•	:	
COMMON /MISC / IPAGECT(31) LINECT(31) , IPRICNT MAXENT HEADLE LU		C MISCELLANEOUS DATA CC	MMON BLOCK		•		•	
HEADEL   HEADEL   HEADEL   HEADVEL		COMMON /MISC	IPAGECT(3			IPRICNT(31)		
TEAD	٠ د	+ +	MAXLINE	WA)	(REPT	MAXEVNI	•	
HEADSR		· •	IDATE	HEA	DALT	HEADVEL		
HEADROI HEADWGT 8145  HEADROI HEADWGT (2) PRTUNGIT(2) PRTUNGIT(2)  HEADER(24) LEVENTS(38) TIMES(38)  HINDS (38) TIMES(38)  HEADER (24) LEVENTS(38) TIMES(38)  HEADER (24) LEVENTS(38) PRTUNCIT  CVECT(3) XYZ(3) SAVITME  HEADER PREMP BIAS SAVITME  PRIMGHE PRIMGHE BIAS PRILNGT  PRIMGHE BRIMGH PRIMASS PRILNGT  COMMON ALOCK  COMMON /PARCHUT / IRECOV TROPLOY PRECOVIL  RECDRAG RECOVED POROSR  COMMON /PARCHUT / IRECOV TROPLOY PRECOVIL  HEADROSD RECOVET (2.25) LIFTRECY PROGRES  POROSD POROSD NETTRE DROGGE DROGGED TO		•	HEADSR	HEA.	DYAW	HE ADP I T		
HEADER(24)   IEVENTS(38)   PRINGIS(2)	9	+	HEADROL	•	DWGT	BIAS	-	
TREDERICE   TRECOVIL   TR	o o	<b>+</b> 4	REPTYPE (5	•	LNG1(2)	TIMES (2)		
### PRTMASS(2)   PRTINDX   PKZVEL    ***CTCL(3)   XYZ(3)   SAVTIME    ***INTEGER   REPTYPE   BIAS   PRTUNGT    ### PRTWGHF   BIAS   PRTUNGT    ### PRTWGHF   PRTUNGT    ### PRTWGHF   PRTUNGT    ### COMMON / PARCHUT / IRECOV   TROPLOV   PRECOVLL    ### RECOVER			INCAUER ( Z	•	10C			
XYZ(3)		+	PRTMASS(2	•	INDX			
TITEGER   REPTYPE   BIAS   PRILINGT		•	ZVECT(3)	XYZ .	(3)	SAVTIME		
PRTWGHF   PRIMASS   PRIINUX	c C	8 1 5 4 1 N 1	REPTYPE	A .	(CEL (3)	ZACCEL(3)		
C SECTION 14 COMMON BLOCK  C SECTION 14 COMMON PARCHUT / IRECOV TROPLOY RECOVIL  **RECAP**  **RECAP**  **RECAP**  **RECAP**  **RECOVIS(2.25) IFTRECV  **PRECAP**		+ +	PRIWGHE	PRI	MASS .	PR1 INDX		
COMMON / PARCHUT / IRECOV TROPLOV .	90	C SECTION 14 COMMON BLO	Š	•			• •	
+ RECOPAG RECOVPD  * RRECAP RECOVPD  * NPTSRLS RECOVLS(2.25) .  * NPTSRT RECOVFT(2.25) .  * DROGUE DRDRAG2  * NPTDFT DROGGT1(2.28) .  * NPTDFT DROGGT1(2.28) .		COMMON /PARCHUT /	•	: .	•	RECOVEL	•	
** ** ** ** ** ** ** ** ** ** ** ** **			RECDRAG	. REC	OVPD	POROSR		
+ NPTSRIS RECOVES(2.25) . + NPTSRFI RECOVET(2.25) . + DOROGUE DRDRAG2 . + NPTDFT1 DROGFT2(2.26) NPTDFT1 DROGFT1(2.26) .		•	XRECAP	. YRE	CAP .	ZRECAP		
+ IDROGUE DEDRAG2 . PECON . PPOROSD2 . VELCON	65	• 1	NPT SRLS		OVLS(2,25)	IFTRECV		
+ POPOROSD		· •	TOPOGUE		.0vr 1 (2,23) .	DEDGEDOS		
+ NPTDFT2 . DROGFT2(2.28) .		•	POROSOZ	. VEL	CON	1F TORO2		
• NPTDET1 DROGET1(2 25)		•	NPTDFT2	DRO .	GFT2(2,28)	16 10 80 1		
(62.2)	0,	•	NP TOF T 1	, DRC	DROGFT1(2,25) .	IDROGL S		

83/11/07. 09.41.53 PAGE												
FTN 4.6+428 83/11/07												
FIN	. TOHR TIME HIS . /	٠	•	, 10HIME HISTOR , /		OHENTS	. 10HENTS	, 10HENTS	, 10HTS		. 10H /	. 10HYNAMIC FOR . /
74/74 OPT=1	10HSEAT/DCCUP , 10HANI ANGULA 10HIGRY WRI A , 10HIRCRAFI DATA (DEDIVE() 0) 1.1 () /	10HLONE LIN 10HIRCRAFT 1.10), I-1,5)	. 10H LINEAR T . 10HAFT I.11), I=1,5) /	+ iOHSEAT ALONE , 10H ANGULAR T + 10HY WRT AIRC , 10HRAFT DATA (REPTYPE(I.12), L=1,5) / + 10HGATAPHI F + 10HINGES, MOM	10H (1,13), I=1,5) F, 10H0RCES, 10H		(REPTYPE(I, 1) ROCKET 4 F . (REPTYPE(I.1) ROCKET 5 F .	10H (REPTYPE(1.18),1=1,51 / 10HRDGKET & F. 10HRDGCES. MUM 10H 10H 10H 10H 10H 10H 10H 10HBART FORCE 10HS, MOMENTS		(REPTYPE(1,22),1=1,5) IVC MICROP , 10+RBDCESSO (REPTYPE(1,23),1=1,5)	·	S. MUMEN: (REPTYPE(1.2) (CQUPANT A. (ES. MOMEN. (REPTYPE(1.2) (REPTYPE(1.2) MOMENTS.
SUBROUTINE INIVRBL	+ 10H + 10H + 10H	+ 10H + 10H DATA	+ 10H + 10H + 10H ATAU	+ 10H + 10H + 10H + 10H DATA	0 + 10H DATA DATA + 10H DATA	+ 10H + + 10H + 10H DATA + 10H + 10H	DATA + 10H + 10H + 10H + 10H 10H 10H	DATA DATA + 10H + 10H DATA	+ 10H DATA DATA + 10H DATA DATA	+ 104 0A1A 0A1A + 10H + 10H	+ 10HR/ + 10H DATA + 10H	DATA DATA + 10HG + 10HG DATA + 10HG

400 410 410 430 435 435 435 435 435 450
--

SUBROUTINE INIVEBL	INIVRBL	74/74	DP1=1	FIN 4.6+428	83/11/07. 09.41.53	PAGE
	AAT(3.1) AAT(4.1) 610 CONTINUE	1)=AAT( 1)=AAT( iuf	AAT(3,1)=AAT(3,1)+DEGRAD AAT(4,1)=AAT(4,1)+DEGRAD CONTINUE			
760		CTION 5	CDNVERT SECTION 5 INPUTS  CONTENTS  CONTINUE  CONTINUE			
26 20 20 20 20 20 20 20 20 20 20 20 20 20		PHISA=PHISA*DEGRAD PSISA=PSISA*DEGRAD THESA=THESA*DEGRAD ************************************	PHISA=PHISA-DEGRAD PSISA=PSISA-DEGRAD THESA=THESA-DEGRAD ************************************	**************************************	•	
470		GERALLA CTION 1	RAILANG-BERAD CONVERT SECTION 10 INPUT VARIABLES			
475	DO 630 RKALPH RKBETA RKGAMA TSTAR(	CO 630 1=1, INRKT  RKALPH(I)=RKALPH  RKETA(I)=RKETA  RKGAMA(I)=RKGAMA  TSTAR(I) = 1, 0	TO 630   1   1   1   1   1   1   1   1   1			
<b>084</b>	630 CONTINUE CONVERT SECT	CTION	G30 CONTINUE C ************************************			
4 8 5	TI ON ONE OF THE PROPERTY OF T	VC 60. PHI-DEGI PSI-DEGI THE-DEGI				
94 9	PIICHRI SMPLRA RKANGEI	L=PITCH T=SMPLR RKANG+OI	PITCHRL-PITCHRL-DEGRAD SMPLRAT*DEGRAD RKANG*RKANG*DEGRAD C	***************************************	•	
495	COUNTY SECTOR OF THE SECTOR OF	UE GLIM	GCOUNTER SECTION 14 INFO! VARIABLES  GSO CONTINUE  GLIMIT * GLIMIT * GRAVITY  BOOO RETURN			

C MUCTION - CONTRUIS READING OF THE INPOSTREE C CALLED BY: C CALLED BY: C CALLS: TO BE DEFINED: C TO BE DEFINED: C TO BE DEFINED: C TO BE DEFINED C TO BE DEFI	- TO BE DEFINED  INS  BY:  BY:  TO BE DEFINED  ARIABLES DEFINED:  O ARIABLES OFFINED:  D C C C C C C C C C C C C C C C C C C	W XSLACK . SST . ZBD1 . ZBD1			
C CALLED BY: C CALLED BY: C CALLS: TN1L2 C NON-COMMON VARIABLE C TO BE DEFINED C POTENTIAL ERROR CON C TO BE DEFINED C POTENTIAL ERROR CON C TO BE DEFINED C SECTION 13 COMMON B C SECTION 4 COMMON B C SECTION 4 COMMON B	DEFINED: S DEFINED: DITIONS: DITIONS: CX	WY WY XSLACK SY SY ZB01			
C CALLS: C CALLS: C TO BE DETINED C TO BE DEFINED C TO BE DEFI	DEFINED: S DEFINED: DITIONS: LOCK CX	WY WY XSLACK SY ZBDT			
C NON-COMMON VARIABLE C TO BE DEFINED C POTENTIAL ERROR CON C TO BE DEFINED C SECTION 13 COMMON B C SECTION 4 COMMON B	DEFINED: S DEFINED: DITIONS: LOCK CX	WW WW XSLACK SY ZBD1			
C NON-COMMON VARIABLE C TO BE DEFINED C TO BE DEFINED C	S DEFINED: DITIONS: LOCK CX CX CX CX CY SZP LOCK	WY WY XSLACK ; SY ZBDT ;			
C TO BE DEFINED C TO BE DEFINED C TO BE DEFINED C SECTION 13 COMMON B C SECTION 13 COMMON B C SECTION 14 COMMON B C SECTION 14 COMMON B	DITIONS: LOCK LOCK CX CX CX CX SZP LOCK	WY WY XSLACK SY ZB01			
C TO BE DEFINED C SECTION 13 COMMON B C SECTION 4 COMMON B C SECTION 4 COMMON B	LOCK CX CX CY SZP	WY XSLACK SY ZBDT			
C SECTION 13 COMMON B	LOCK CX CX CY SZP	WY XSLACK SY ZBOT			;
C SECTION 13 COMMON B C COMMON B C C SECTION 4 COMMON B C C SECTION 4 COMMON B C C C C C C C C C C C C C C C C C C	LOCK CX CY SZP . SZP	WY XSLACK SY ZBOT			
COMMON /DYNCGIN	/ IDYNCG	WY XSLACK SY ZBDT			
COMMON /DYNCGIN	CX C	XSLACK SY ZBDT	*****		*
C SECTION 4 COMMON BY	CY CY SZP .	ASLACK SY ZBOT		2	
C. SECTION 4 COMMON B	SZP	ZB0T		ZSLACK	
C SECTION 4 COMMON B	Lack	* * * * * * * * * * * * * * * * * * * *	•	SZN2	
C SECTION 4 COMMON B	LOCK		:	*******	***
	***	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	***************************************	******	*
CMMI / TOTOTAL MOMMO	/ TEMP	PRESSUR	ZACVEL	XPOS YP	YPOS
+	ZPOS	XTAIL .	YTAIL .	٠.	•
•	PITCH .	ROI !	RVEL .	QVEL .	ا ب
+	WINDX.	WINDY .	WINDZ .	XACVEL CKF	CKPITHT
•	DENSITY.	NPTSAAT.	AAT (4,50	.50). NPTSLAT, LAT(4.50)	*
5714C2V	IACSFEG.		*****	******	* * * * *
C SECTION 9 COMMON BLOCK	LOCK				
	**********			**********	•
COMMON /ICATPLT / INCAT	/ INCAT	•	CATLNT(2).	CATSIK(2), ICI (2)	֝֞֝֝֟֝֝֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֝֓֓֓֓֓֓֡֝֡֓֓֡֡֝֡֓֓֡֝֡֓֡֡֝֡֡֡֡֡֓֡֡֡֡֓֡֡֝֡֡֡֡֡֡
•	XPOSAP(2)	. (6	YPUSAP(2)		OT INC
* *	PTUBE		MUTUBE		1CATOUT
REAL	KTUBE		MUTUBE		•
		• • • • • • • • • • • • • • • • • • • •	•		
C SECTION 1 COMMON BLOCK	LOCK	*****	*****	*****	•
COMMON / ICONTRL / ISTART	/ TSTART	TST0P	ESTOP .	IRESTRT, IUN	ZI I S
*************	œ	۵	IPLOT	, IDRIFLG,	
•	I PHASE 1,	IPHASE2,	IPHASE3		
INTEGER	ESTOP				
		*******	****	*****	*
C SECTION 11 COMMON BLOCK	LOCK		***************************************		•
COMMON / IDARIIN / IDARI	/ IDARI	DRIFRCE	E DRTS	DRISIRI , DRISTOP	٠.
+	XDRTAP(2	). YDRTAP(2).	(2), ZDRT	AP(2).	
+ xDRICP(2), YDRICP(2), ZDRICP(2)	XDRTCP (2	), YDRTCP	(2), ZDRT	CP(2)	
C. SECTION 2 COMMON BLOCK	3 OCK	* * * * * * * *	***		*
•		********	*******	**********	****
COMMON /IDELTAT / DIPHAS1, DIPHAS2, DIPHAS3	/ DIPHAS1,	DIPHAS2.	<b>DTPHAS3</b>		

COMMON / IRAIL / RAILNIH RAILANG ISTRL NSLBKS  KXSB KYSB NUSB VKTOR  TOOSRE TOO		****************	*********	*****	• • • • • • • • • • • • • • • • • • • •	*********	***	
REAL Cossession C SECTION Cossession	HIN I LAST / NOMBOO	/ RAIL NIH	RATI ANG	51	•	•		
REAL CONTROLL CONTROLL CONTROLL COMP		KXSB	KYSB			YKTOR		
REAL C. SECTION C. SECTION C. SECTION		XPDSRRF	VPOSRRE		RRF			
REAL C. SECTION C. SECTION C. SECTION COMP.		YOUSTOR	AD INDA	•	- L			
Correction Correction Correction Correction					1970000			
C SECTION C SECTION C SECTION		(A) B550 AV			,			
C SECTION C SECTION COMP		KXSB	. KYSB	WUSB.				
C SECTION C************************************	************	********	********		*********	********	• • • •	
MOD MOD	C 10 INCHMODE	2					•	
COMP	S COMPON ISL							
COM			*****					
INTE	COMMON /IREPORT / IREPTS(31)	IREPTS(3	•	PRIFRO, PII, PIZ, PIZ	.P12,P13			
,	050	PRIFRO P	PRIFRO PIT. P12 P13	c				
							4	
							•	
C RECALCUL	C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK	HRUST TAB	LE COMMON	BLOCK			•	
	***********	********	********		********	•••••••	••••	
	/ TINGTYOU NOT	OV TOUT / 2	28.61					
	ACT AND A NOW	200148	10.54.					
C********	***********		••••••					
C SECTION	10 COMMON BLD	ž					•	
			*******	• • • • • • • • • • • • • • • • • • • •	*******	• • • • • • • •		
				0,000		11000		
ANO COMP	COMMON / INDCKET /		. KKDELY(6).			I MOKOGI		
•		DK IGN(6)	RKWGHT (6)		RKRURN(6) TS	TSTAR(6)		
•		1						
+		XPOSRK(6)	). YPOSRK(6)		ZPOSRK(6).			
•		DKA! DH!			DKGAMA(6) DKTHPST(2 25 8	THRST(2.2	5	
	1	01470						
	INIEGER	Z L L N						
	**********************			************	•			
C SECTION	SECTION 6 COMMON BLOCK	ž					•	
				4 4 4 4 4 4 4		****	4	
			:				•	
STOCK TO THE STOCK	COMMON / ISEATOC / IPCNTL	IPCNTL	XCGSO.	YCGS0	. ospoz	IXXSO .		
•		1 1 1 5 5	1x7cn	14450	14750	17750		
		044.04	40414	040103	A COLON			
٠		DC WAR	ADARK	SECTION.				
•		IXXOA .	IXYOA	IXZOA .	IYYOA	1 Y Z O Y		
٠		12204	XCGOA	YCGOA	ZCGOA	SOSEP		
				0300				
•				י מכני				
+		C to A	C20A	C304	C404			
4 40		LAKED	TYVCD	1×250	14460	17750		
Y C Y C		0000	1 7 20					
+		12250	YOX.	IXYUA .	IXZUA .	. 4071		
•		1 Y Z O.A.	I 220A					
	*********	*********	********	********	********	********	••••	
NOT LUBY	Ų	7					•	
101.736	NOW TO SEE OF THE PROPERTY OF			1				
	***************************************						•	
100 100 100	COMMON /ISETALN / XPOSSRP	XPOSSRP.	YPOSSRP.		XCGSA.	YCGSA .		
		43004	1 x x c x		7 X 7 C A	4277		
•		-						
+		IYZSA ,	1225A	PHISA.	PSISA .	THE SA		
٠		ARFASA	HGHTSA	WGHTSA	xP05801.	YP05801.		
					10000			
•		, 108012	20000	1103363	, Caccar			
•		C1SA .	C2SA .	C3SA .	CASA			
190		IXXCA	IXVCA	1 x 7 C A	IVVCA	1775A		
		12861						
•		WC 7 7 1				• • • • • • • •		
	• • • • • • • • • • • • • • • • • • • •	**************************	• • • • • • • • • • • • • • • • • • • •		******		:	
C SECTION	C SECTION 12 COMMON BLOCK	ž					•	
0	************		************	•			:::	
4400	/ NIDVII/ NOMMOD	1100	MOM	MP<	#1 X F			
•		KULLKL.	FI CHAP.	SMPLKA!	I VCDLAY.			
+		RKANG						
14 30		1 man	1007	MTLIE				
					J. J. C. JE .			

PAGE

S	,	C MISCELLANEOUS DA!A COMMON BLOCK	COMMON BLUCK		• • • • • • • • • • • • • • • • • • • •
		COMMON /MISC	/ IPAGECT(31)	LINECT(31)	, IPRICNI(31)
		•	MAXLINE .	MAKREPT	. MAXEVNT
		•	104TE	L EXXILG	. 50
		• 4		HEADVAN	HEADVEL HEADVEL
		• •	HEADROI	HEADWGT	RIAS
		•	REPTYPE (5, 31)	PRTLNGT(2)	PRIWGHT(2)
		•	IHEADER(24)	IEVENTS (38)	TIMES(38)
		•		IMVDC	
		•	PRTMASS(2)	PRINDX	
		. +	ZVECT(3)	XYZ(3)	SAVTIME
		•	XACCEL(3)	YACCEL(3)	ZACCEL(3)
		INTEGER	REPTYPE	BIAS	, PRTLNGT
		+ +	PRTWGHT PRTEMP	PRIMASS	. PRTINDX
	U	*****	*************	***********	************
	<b>.</b>	SECTION 14 COMMON B			•
	,	LIFTOWAY NORMOO		:	
		+	PECDRAG	RECOVED	POROSR
		. +	XRECAP	YRECAP	ZRECAP
		•	NPTSRLS	RECOVLS(2,25)	IFTRECV
		•	NPTSRFT	RECOVET(2,28)	SEPFRCE
		•	IDROGUE	DRDRAG2	, DROGP02
		+	POROSD2	VELCON	, IFIDRO2
		•	NPTDFT2	DROGFT2(2,25)	, IFIDRO1
		+	NPTDFT1	DROGFT1(2,25)	, IDROGLS
		•	NPTSDLS .	DROGLS(2,25)	, TOOPLOY
		+	DISPLOY .	DROGLL	, DRDRAG1
		+	DROGPD 1	POROSD 1	, DROVELX
		•	DROVELY .	OROVEL 2	, XDROGAP
		*	YOROGAP .	ZDROGAP	, CHALT1
		+	CHALT2	GLIMIT	. TDELAY
		•	AREADC .	WGHTDC	, TFP1
		+	TFP2	TFP3	, TDROGLS
		+	cooc.	NPTSRDT	. RECOVDT(2,25)
	<b>U</b> (		:	************	***********
	<b>U</b> (	DAMPING COLFFICIENT	COMMON BLOCK		1
	J				*
	Ĺ				
	,		MAR 5), IVARBL( 5)	WARNING( 4)	
		EQUIVALENCE (IN	APDATA(1), IRESTRT)		
		DATA IVARBL /7	PHIRESTRY, THIUNITS	•	
				•	
		+	MIPLOT /	•	
		DATA WARNING/ 10	HWARNING ( SU. 10HBRO	UTINE 1, 10HNPUT	
		+ 10H	/		. ( • 100
		DAIA FAILERR/ 10	MITALAL ERKO, IUTIKI SI	DENCOLIT. ICHNE	¥.0.1)•.
		r	,		
		,			
	Ĺ	*************			

C READ SECTION 3 DATA AND EDIT  C READ(1 5031) DIPHAS1, DIPHAS2, DIPHAS3  IF (DTPHAS1 LE. 0.0) GG TO 9030  IF (DTPHAS2 LE. 0.0) GG TO 9035  IF (DTPHAS2 LE. 0.0) AND, (1505EP GT. 0)) GG TO 9040  C READ SECTION 4 DATA AND EDIT	11) TEMP , PRESSUR, 11) XPOS , YPOS , 11) YAW , PITCH , RO 11) RVEL , QVEL ,	) XACVEL ZACVEL NPTSAAT LT 0) OR (NPT EO 0) GO TO 220	C READ VALUES INTO ARRAY AAT BASED ON THE VALUE IN NPTSAAT.  C I.E. IF NPTSAAT = 10 THEN 10 SETS OF 4 VALUES ARE READ IN.  C+++++++++++++++++++++++++++++++++++	IF(NPTSLAT . LT. O) IACSFLG = 2 NPTSLAT = IABS(NPTSLAT) IF(NPTSLAT . GT. 50) GD TO 9050 IF (NPTSLAT . EQ. 0) GO TO 260	C READ VALUES INTO ARRAY LAT BASED ON THE VALUE IN NPTSLAT.  C I.E. IF NPTSLAT = 5 THEN 5 SETS OF 4 VALUES ARE READ IN.  C. READ (1,5070) ((LAT(I,J),I=1,4),J=1,NPTSLAT)	C READ SECTION 5 DATA AND EDIT		XPOSSOT, YPOSSOT, XPOSSOS, YPOSSOS, O).OR. (1998A.EQ.O) LE. O.O) GO TO 9075	• 1225a - 1225a • 1725a + 1225a • 1725a + 1225a • 0.0) GD TD 9102	**************************************
230	240	245	250	255	260	265	270	275	280	285

READ(1,5025) NPTSCT(1)

SUBROUTINE INPUT

INDX = NPISCI(1)

345

350

355

360

365

```
C READ VALUES INTO ARRAY CATHRST BASED ON THE VALUE IN NPTSCT.

C I.E. IF I = I AND MPTSCT = 3 THEN 3 SETS OF 2 VALUES ARE READ

C IN FOR CATAPULT #1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   READ(1,5070) RKIGN(1) , RKWGHT(1), RKBURN(1), RKDELY(1)
READ(1,5031) XPOSRK(1) , YPOSRK(1), ZPOSRK(1)
READ(1,5031) RKALPH(1) , RKBETA(1), RKGAMA(1)
READ(1,5013) RKNPTS(1)
INDX = RKNPTS(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DO 701 I=1,INDX
IF ((ESTQP .GT. INDX+4 .AND. ESTDP .LT. 12) .DR.
(ESTOP .GT. INDX+10 .AND. ESTDP .LT, 18)) GO TO 9452
                                                                                                                                                                                                                                                                                                           GO TO 9420
                                                                                                                                                                                                                                                                                                                                                                                                            LE 4) GO TO 9425
                                                                                                                               READ(1,5070) (CATHRST(1,J,1),CATHRST(2,J,1),J=1,INDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               READ(1,5070) (RKTHRST(1, J.1), RKTHRST(2, J.1), J+1, INDX)
                                                                                                                                                                                                                                                           READ(1,5025) ITUBEND
IF(ITUBEND .Eq. 0) .OR. (ITUBEND .Eq. 1)) GOTO 660
IF(ITUBEND .NE. 2)
GO TO 94
READ(1,5031) KTUBE , CTUBE , PTUBE
READ(1,5050) MUTUBE , EXTLNGT
GO TO 660
                                                                                                                                                                         IF((1, GT, ESTOP), QR, (ESTOP, GT, 4)) QD TO 630
IF (ESTOP, EQ, 2, AND, INCAT, LT, 2) GD TO 9422
IF (ESTOP, EQ, 4, AND, INCAT, LT, 2) GD TO 9422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF((INDX .LT. 2) .OR. (INDX .GT. 25)) GO TO 9450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF (INRKT .EQ. 8 .OR. (ESTOP .NE. O .AND.
+ (6 .GT. ESTOP .OR. ESTOP .GT. 17))) GO TO 710
                                                                                                                                                                                                                                                                                                                                                                                            IF((1 .LE. ESTOP) .AND. (ESTOP
IF(IREPIS(12) .NE. 0) GO TO 8230
660 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DO 702 I=INDX,18
IF (IREPTS(I) .NE. 7) GO 10 8235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INDX = INRKT+1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INDX = INRKT + 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CALL THRUST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ISAVE = 1
                                                                                                                                                                                                                                             CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           700 CONTINUE
                                                                                                                                                         620 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     680 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                701 CONTINUE
                                                                                                                                                                                                                                               630
```

370

375

380

385

390

```
C READ IN DROGFT2
                                                                                                                                                                                                                                                                                                             C READ SECTION 14 DATA AND EDIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C READ VALUES INTO ARRAY RECOVDT BASED ON THE VALUE IN NPTSRDT.

C I.E. IF NPTSRDT = 20 THEN 20 SETS OF 2 VALUES ARE READ IN.

CONTRACTOR OF THE STATE OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF((IDROGUE .EQ. 0) .AND. (IREPTS(20) .NE. 0)) GO TO 8250
                                                                                                                                                                                                       READ (1,5070) (DROGFT2(1,1), DROGFT2(2,1), I=1, NPTDFT2)
                                                                                                   READ (1, 5025) NPTDFT2
IF ((NPTDFT2 .LT. 2) .OR. (NPTOFT2 .GT. 25)) GOTO 9635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  READ(1,5070) (RECOVDT(1,1), RECOVDT(2,1), I=1, NPTSRDT)
                                                                                                                                                                                                                                                                                                                                                                                                 .GT. 2)) GO TO 9510
                                                                                                                                                                                                                                                                                                                                                 READ(1,5025) IRECOV

IF (IRECOV .EQ. 0) GO TO 927

IF (IRECOV .LT. 0) .OR. (IRECOV .G

READ(1,5050) RECOVLL , RECDRAG

IF (RECOVLL .LT. 0.0) GO TO 9530

IF (RECOVLL .LT. 0.0) GO TO 9540

READ(1,5050) RECOVPD , PORROSR

IF (RECOVPD .LT. 0.0) GO TO 9550

IF (RECOVPD .LT. 0.0) GO TO 9555
IF (DROGPD2 .LE. 0.0) G010 9610
IF (POROSD2 .LT. 0.0) G010 9615
READ (1,5025) IFTDR02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            READ(1,5031) CHALT1 , CHALT2
IF(CHALT1 ,LT 0.0) GD TD 9720
IF(CHALT2 ,LT 0.0) GD TD 9725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        READ(1,5046) TDELAY
IF(TDELAY LT. 0.0) GO TO 9730
READ(1,5025) NPTSRDT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       READ (1,5046) TRDPLOY
1F(TRDPLOY .LT. 0.0) G0T0 9520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YRECAP
                                                           1F (1F1DR02 .EQ. 0) G010 975
1F (1F1DR02 .NE. 1) G010 9630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           READ(1,5031) XRECAP
READ(1,5031) CHALT1
                                                                                                                                                                                                                                                                        980 CONTINUE
                                                                                                                                                                                                                                975 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G010 875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       875 CONTINUE
                                                               460
                                                                                                                                                                                                                                                                                                                                                                              475
                                                                                                                                                                    465
                                                                                                                                                                                                                                                                        470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50
```

READ(1,5025) NPTSRFT IF((NPTSRFT\_LT\_2) \_OR\_(NPTSRFT\_GT\_25)) GO\_TO\_9580

READ(1,5070) (RECOVLS(1,1), RECOVLS(2,1),1=1, NPTSRLS)
READ(1,5025) IFTRECV

IF(IFTRECV EQ. 0) GO TO 925
IF(IFTRECV NE. 1) GO TO 9570

510

IREPIS( 5) = 0 IREPIS( 6) = 0 IREPIS( 9) = 0 IREPIS( 10) = 0 IREPIS( 11) = 0 IREPIS( 11) = 0 IREPIS( 11) = 0 IREPIS( 11, 1000) IWRITE( 11, 1000)	<u> </u>	IF(IWRNELG.NE.O)GOTO 95 WRITE(LU,7000) IWNNELG = 1 WRITE(LU,8231)WARNING GO TO GGO CONTINUE DO 8237 I = INDX, 18 IREPTS(I) = 0 CONTINUE IF(IWRNELG.NE.O)GOTO 96		IF(IWRNFLG.NE.O)G0T0 98 WRITE(LU,7000) WRITE(LU,8246)WARNING G0 T0 927 IREPTS(20) = 0 WRITE(LU,7000) WRITE(LU,7000) WRITE(LU,7000)	WRITE(LU,8251)WARNING GO TO 980 GOTO 980 IF(IWRNELG,NC,0)GOTO 909 WRITE(LU,7000) IWRNELG * 1
575 580 8010	585 93 590 8230	895 8235 8235 600	96 605 8240 97 610 8245	615 98 825 <b>0</b> 620	8255 625 909

SUBROUTINE INPUT	INPUT	14/74	091Š	FTN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE	123
<b>6</b> 30	GDTO 2 C PROCESS FA		•	•	:•			
	9000 WRITE(		•	***	:			
635	9005 WRITE G0 10		LU,9006) FATLERR,TSTOP 9900					
?	9010 WRITE		FATLERR.ESTOP					
	9015 WRITE	TE(LU, 9016)	LU, 9016) FATLERR, ESTOP					
640	9012 WRITE(		99000 10,9013) FATLERR,PI1,PI2,PI3					
	9017 WRITE(		9900 10,9018) FATLERR, ISOSEP					
!	9020 WRITE	TE(LU, 9021)	FATLERR, IVARBL (IERROR),					
645	OS •	POATA( JERRU TO 9900	4 INPOATALIERRURY GD TO 9900					
	9022 WRITE	TE(LU,9023) TO 9900	FATLERR, IPLOT					
i d	9025 WRITE(		LU, 9026) FATLERR, TSTART , TSTOP					
000	8027 WRITE	TE(LU, 9028)	FATLERR, ESTOP					
	9030 WRITE(	TE (LU, 9031)	9900 LU,9031) FATLERR, DTPHAS1					
655	GD TD 9035 WRITE(	TO 9900 TE(LU,9036)	FATLERR, DIPHAS2					
	GD 10 9040 WRITE(	TO 9900 TE(LU,9041)	FATLERR, DTPHAS3, ISOSEP					
	G0 T0 9045 WRITE	TD 9900 TE(1U.9046)	FATLERS NPTSAAT					
099	GO 10 9050 WRITE	TO 9900	0 9900 F(LU.9051) FATLERR.NPTSLAT					
		TO 9900	9900 LU. 9071) FATLERR . XACVEL					
e G		TD 9900	FATLERR WGHISA					
		0066						
	9085 WK11E1	10 9900 10 9900	D 9900					
670	9090 WRITE(	7E(LU,9091) 10 9900	FATLERR					
,	9100 WRITE	TE(LU,9101)	FATLERR					
	9102 WRITE	TE (LU.9103)	FATLERR					
675	9 104 WRITE(	TE (LU, 9105)	FATLERR					
	GD 10 9110 WRITE(	TE (LU,9111)	FATLERR					
	GO TO 9115 WRITE(	TO 9900	FATLERR					
089	G0 10	TO 9900	000					
		10 9900	× 1					
	9119 WRITE	TE(LU.9120) FATLERR TO 9900	FATLERR					

WRITE(LU,9122) GO TO 9900 WRITE(LU,9124) GO TO 9900	9125 WRITE(LU.9126) FATLERR.ISTRL GO TO 9900 9127 WRITE(LU.9128) FATLERR.NSLBKS GD TO 9900 9400 WRITE(LU,9401) FATLERR.INCAT	G0 T0 9900 WRITE(LU,9411) FATLERR,NPTSCT( G0 T0 9900 WRITE(LU,9421) FATLERR,ITUBEND G0 T0 9900	9422 WRITE(LU,9423) FATLERR,ESTOP, INCAT GD 70 9900 9425 WRITE(LU,9426) FATLERR,ESTOP GD 70 9800 9430 WRITE(LU,9431) FATLERR,INRKT	9450 WRITE(LU,9451) FATLERR.RKNPTS(ISAVE) GD TO 9900 9452 WRITE(LU,8453) FATLERR,ESTOP, INRKT GD TO 9900	G0 10 9900 WRITE(LU,9471) G0 10 9900 WRITE(LU,9481)		GO TO 9800 WRITE(LU,9521) GO TO 9900 WRITE(LU,9531) GO TO 9900	10 12 01	GG TG 9900 WRITE(LU,9561) GG TG 9900 WRITE(LU,9566)	9570 WRITE(LU.9571) FATLERR.IFTRECV GD TO 9900 9580 WRITE(LU.9581) FATLERR,NPTSRFT GO TO 9900 9680 MBITE(LU.9641) FATLEDB TRBDGHE	GO 10 9900 WRITE (LU, 9601)
8 8 8	069	695	700	705	710	715	720	725	730	735	740

SUBROUTINE INPUT	INPUT	74/74 0	OPT = 1	FIN 4.6+428	83/11/07. 0	. 09.41.53	PAGE	125
745			9900 10.9611) FATLERR.DROGPD2 9900 LU.9616) FATLERR.POROSD2 9900					
750		WRITE(LU, 9621) GD TD 9900 GD TD 9900 GD TO 9900 WRITE(LU, 9636) WRITE(LU, 9636)	LU,9621) FATLERR, VELCON 9900 9900 1U,9630) FATLERR, IFTDRO2 1U,9636) FATLERR, NPTDFT2 9900					
755	9650 WRI 9650 WRI 9660 WRI		LU,9641) FAILERR, IFIDRU) 9900 1U,9651) FAILERR, NPTDFT1 LU,9661) FAILERR, IDROGLS					
760	GD 9670 WR1 9680 WR1 9690 WR1	GD TD 9900 WRITE(LU,9671) GD TD 9900 WRITE(LU,9681) GD TD 9900 WRITE(LU,9691)	9900 LU.9671) FATLERR.NPTSDLS 9900 LU.9681) FATLERR.TDDPLOY LU.9691) FATLERR.DISPLOY					
765		GO TO 9900 WRITE(LU, 9701) GO TO 9900 WRITE(LU, 9706)	9900 (LU,9701) FATLERR, DROGLL 9900 (LU,9706) FATLERR, DRDRAG1					
077			9900 LU.9711) FATLERR, DROGPD1 LU.9718) FATLERR, POROSD1 9900					
775	9720 WRITE GD TO 9725 WRITE GD TO 8730 WRITE		LU.9721) FATLERR.CHALII 9900 1U.9726) FATLERR.CHALT2 9900 LU.9731) FATLERR,TDELAY					
780	GD TO 9740 WRITE GD TO 9745 WRITE GD TO 9750 WRITE		9900 LU.9741) FATLERR,AREADC 9900 LU.9746) FATLERR,WGHTDC LU.9751) FATLERR,CODC					
785	C SET ERROR C ROUTINE TI C ************************************	ROR FLAG (1ER E THAT A FATA	FLAG (IERREG) TO ONE(1) TO INDICATE TO THE CALLING HAT A FATAL ERROR HAS OCCURRED.	THE CALLING	: • • •			
790	WRITE STOP C C RETURN TO	WRITE(LU,9990) STOP -ERROR IN INPUT" RN TO CALLING PROGRAM	(LU 9990) -ERROR IN INPUT" CALLING PROGRAM		: • :			
795	9999 CONTINUE RETURN CONTINUE C READ FORMAT		9999 CONTINNE RETURN GCC		;•:			

PAGE

```
C WRITE FORMAT STATEMENTS
Conservations of the contraction of the cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8239 FORMAT(SX,4A10,
+ "ROCKET REPORT FLAGS FOR ROCKET NUMBER(S) GREATER THAN ",12,1X,
+ "WERE RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "REPORT FLAG FOR REPORT 12 HAS BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8246 FORMAT(5X,4A10,
+ "REPORT FLAG FOR REPORT 21 HAS BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8251 FORMAT(5X,4A10.
+ "REPORT FLAG FOR REPORT 20 HAS BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "REPORT FLAGS FOR REPORTS 4.5.6.9,10,11,25 AND "26 HAVE BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "REPORT FLAGS FOR REPORTS 5.6.10,11 AND 26 "HAVE BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7000 FORMAT(1H1,48X,35(1H+),/,
+ 49X,"*WARNING MESSAGES AND FATAL ERRORS+",/,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8241 FORMAT(5X,4A10,
+ "REPORT 22 FLAG HAS BEEN RESET TO ZERO*)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9011 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"ESTOP ENTERED AS ". 12./,1X,
+"BUT SHOULD BE A NUMBER IN THE RANGE 1 THRU 28",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +"BUT SHOULD BE ZERO WHEN ISTOP IS NOT ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "ISEATTR HAS BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "DMPGC HAS BEEN RESET TO ZERO")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REPORT
                                    FORMAT(2(10X,F10.4),18X,12,19X,11)
FORMAT(4(19X,11))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9001 FORMAT(1X.//72(1H+)/.4X.4A10./.1X.
+*151ART ENTERED AS ".F10.4./.1X.
+72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9016 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"ESIOP ENTERED AS ". 12,/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9006 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"TSTOP ENFERED AS ",F10.4,/,1X,
                                                                                                                                                                                                                                                                                                      FORMAT(2(10X, F10.4))
FORMAT(2(10X, F10.6), 10X, F10.4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C FORMATS FOR FATAL ERROR MESSAGES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49X, 35(1H+),//
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C FORMATS FOR WARNING MESSAGES
                                                                                                                                                                                                            FORMAT(3(10X, F10.4))
FORMAT(10X, F10.4)
                                                                                                                                                                       (61
                                                                                                                                                                                                                                                                                                                                                                                                5070 FORMAT (4(10X, F10.4))
                                                                                                                      FORMAT (2(17X, 13))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8231 FORMAT (5X, 4A10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8006 FORMAT(5X, 4A10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8001 FORMAT (5X, 4A10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BO11 FORMAT(5x, 4A10.
FORMAT (8(A 10))
                                                                                                                                                                   FORMAT (3( 17X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8256 FORMAT(5x, 4A10,
5001
5011
5013
5013
5025
5046
5050
5050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        820
                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   840
                                                                                                                                                                                                                                                                 805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          835
```

0PT=1

74/74

SUBROUTINE INPUT

```
9041 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"DTPHAS3 ENTERED AS ",F10.4,/,21X.
+"BUT SHOULD BE GREATER THAN ZERD (0) WHEN ISOSEP EQUALS ".12./,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9028 FORMAT(1X,//72(1H*)/,4X,4A10./,1X,
+*ESTOP ENTERED AS ", 12,/,1X,
+*BUT CANNOT BE AN EVENT STOP REPRESENTING A SEAT/OCCUPANT ",/,1X,
+*SEPARATION WHEN 1SOSEP EQUALS ZERO(0)",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +"BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(0)",/, 1X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9026 FORMAT(1X,//72(1H+)/, 4X,4A10./, 1X,
+"TSTART ENTERED AS ",F10.4,/,21X,
+"TSTOP ENTERED AS ",F10.4,/,21X,
+"IF ISTART > 0 AND ISTOP NOT ZERO THEN ISTART",/,21X
                                                                                                                                                                                                                                                                                                                                                     9023 FORMAT(1X,//72(1H*)/,4X,4A10./.1X,
+"IPLOT ENTERED AS ". 12./.1X,
+"BUT SHOULD BE A NUMBER IN THE RANGE 1 THRU 4"./.1X,
+72(1H*))
9013 FORMAT(IX,//72(1H*)/4x,4A10,/,1X,
+"PRINT FREQUENCIES ENTERED AS ",314,/,1X,
+"BUT MUST BE GREATER THAN OR EQUAL 10 ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9046 FDRMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"NIPSAAT ENTERED AS ", 13,/,21X,
+"BUT SHOULD BE IN THE RANGE O THRU 50",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   +*BUT SHOULD BE IN THE RANGE O THRU 50",/, 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9076 FORMAT (1X.//72(1H*)/,4X,4A10./,1X,
+*WGHTSA ENTERED AS ".F10.4./,21X.
+*BUT SHOULD BE GREATER THAN ZERO (0)",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9031 FDRMAT (1x, //72(1H+)/,4x,4A10./,1x,
+*DTPHAS1 ENTERED AS ",F10.4,/,21x,
+*BUT SHOULD BE GREATER THAN ZERO (0)*,/,1x,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9036 FORMAT(1X,//72(1H*)/,4X,4A10./,1X,
+"DIPHAS2 ENTERED AS ",F10.4./,21X,
+"BUT SHOULD BE GREATER THAN ZERO (0)",/,1X,
                                                                                                                  9018 FORMAT(1X, //72(1H+)/, 4X, 4A10./, 1X, +"150SEP ENTERED AS ", 12,/1X, +" AND NOT ZERG(0), ONE(1), GR TWG(2)", /, 1X,
                                                                                                                                                                                                                                     9021 FORMAT (1X, //72 (1H+)/, 4X, 4A10./, 1X, +A7, " WAS ENTERED AS ", 13, /, 1X, +" AND NDT A ONE (1) DR ZERO(D)", /, 1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9051 FDRMAT(1X,//72(1H+)/.4X.4A10,/.1X.
+"NPTSLAT ENTERED AS ", 13,/.21X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9071 FDRMAT(1X, //72(1H+)/, 4X, 4A10, /, 1X, +"XACVEL ENTERED AS ", F10.4, /, 21X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  +"MUST BE < TSTOP"./.1X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +72(1H+))
                                                                                                                                                                                                                  +72(1H•))
                                                                                                                                                                                                                                                                                                                                    +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    +72(1H+))
                                                                                               +72(1H+))
                                                                                               860
                                                                                                                                                                                                                                                   865
                                                                                                                                                                                                                                                                                                                                                                                                 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           905
```

```
9116 FORMAT(1X, //72(1H+)/,4X,4A10,/,1X,
+*MOMENTS OF INERTIA ABOUT THE MAIN AXES(OCCUPANT ALONE) MAY NOT ",
+*BE ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9111 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,+"MOMENTS OF INERTIA ABOUT THE MAIN AXES(SEAT/DCCUPANT) MAY NOT+"BE ZERO",/,1X,
                                                                                                                                                                                                            910! FORMAT(IX,//72(1H+)/,4X,4A10,/,1X,
+*MOMENTS OF INERTIA ABOUT THE MAIN AXES(SEAT ALONE) MAY NOT
+*BE ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9120 FORMAT(1X, //72(1H+)/.4X.4A10./.1X,
+*-1XYSO+C1SD+1YYSO+C2SO-1YZSO+C3SO MAY NOT BE ZERO*./.1X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C +72(1H+))
C9124 FORMAT(1X,//72(1H+)/,4X,4A1O,/,1X,
C +"-IXYOA+C1OA+IYYOA+C2OA-IYZOA+C3OA MAY NOT BE ZERO*,/,1X,
C +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                            9105 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"-IXYSA+C1SA+IYYSA+C2SA-IYZSA+C3SA MAY NOT BE ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9128 FORMAT(1X,//72(1H+)/,4X,4A10./.1X,
+"NSLBKS ENTERED AS ", 13./.21X,
+"BUT SHOULD BE IN THE RANGE ZERO (0) THRU SIX (6)"./.1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9421 FORMAT(1X, //72(1H+)/.4X,4A10./.1X,
+*ITUBEND ENTERED AS ". I3./.21X,
+*BUT SHOULD BE ZERO (0) , ONE (1) , OR TWO (2)"./.1X,
                                                                                                                                                                                                                                                                                                                                  9103 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+*IXXSA+IZZSA-IXZSA+IZZSA+IXISBE ZERO*,/,1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9118 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+"IXXSO+IZZSO-IXZSO+IXZSO MAY NOT BE ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C9122 FORMAT(1X,//72(1H+)/,4X,4A1O,/,1X,
C +"IXXDA+IZ2DA-IXZDA+IXZDA MAY NOT BE ZERO",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9411 FORMAT(1X.//72(1H+)/.4X.4A10./.1X.
+*NPTSCT ENTERED AS ". 13./.21X.
+*BUT SHOULD BE IN THE RANGE 2 THRU 25"./.1X.
                                                                                         9091 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+*WGHTDAA ENTERED AS ",F10.4,/,21X,
+*BUT SHOULD BE GREATER THAN ZERO (0)",/,1X,
+"WGHTDAB ENTERED AS ",F10.4,/,21X,+"BUT SHOULD BE GREATER THAN ZERO (0)",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +"INCAT ENTERED AS ", 13,/,21%,
+"BUT SHOULD BE IN THE RANGE O THRU 2",/,1%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9126 FORMAT(1X, //72(1H+)/, 4X, 4A10, /, 1X, +*1STRL ENTERED AS ", 13, /, 21X, +*BUT SHOULD BE ZERO (0) OR ONE (!)", /, 1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9401 FORMAT(1X.//72(1H+)/.4X.4A10./.1X.
                                                                                                                                                                                   +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +72(1H+))
                                                                +72(111•))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   940
                                                                915
                                                                                                                                                                                                                     920
                                                                                                                                                                                                                                                                                                                                                                       925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              955
```

975

9426 FORMAT(1X.//72(1H+)/,4X,4A10./,1X,
+\*ESTOP ENTERED AS ", I3./.1X,
+\*REPRESENTING A CATAPULT EVENT WHEN NO CATAPULTS

+"EXIST"./. 1X.

980

985

9431 FORMAT(1X, //72(1H+)/.4X,4A10./.1X. +"INRK! ENTERED AS ". 13,/.21X. +"BUT SHOULD BE IN THE RANGE O THRU 6"./.1X. +72(111+))

+"RKNPTS ENTERED AS ", 13,/,21%, +"BUT SHOULD BE IN THE RANGE 2 THRU 25"./.1X 9451 FORMAT(1X,//72(1H+)/.4X,4A10,/,1X. +72(1H+))

+-FSTOP ENTERED AS ". 13./.21x.
+"INRKT ENTERED AS ". 13./.21x.
+"ROCKET EVENT STOP CANNOT REPRESENT A ROCKET",/.21x.
+"GREATER THAN THE NUMBER OF ROCKETS THAT EXIST",/.1X. 9453 FORMAT(1X,//72(1H+)/.4X,4A10./.1X.

990

9461 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X, +"IDART ENTERED AS ", 13,/,21X, +"BUT SHOULD BE ZERO (0) OR ONE (1)",/,1X, +72(1H+))

9471 FORMAT(1X.//72(1H+)/.4X.4A10./.1X. +"DRISTOP ENTERED AS ".F10.4./.21X. +"DRISTRT ENTERED AS ".F10.4./.21X. +"BUT DRISTOP MUST BE GREATER THAN DRISTRT"./.1X. +72(111+)) +72(1H+))

800

9481 FORMAT(1X,//72(1H+)/.4X,4A1O./.1X, +"ITVC ENTERED AS ".I3./.21X, +"BUT SHOULD BE ZERO (0) OR ONE (1)"./.1X. +72(1H+))

1005

9491 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X, +"TVCDLAY ENTERED AS ".F10 4,/,21X, +"BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO",/,1X,

1010

OR TWO (2)",/.1X 9501 FORMAT(1X,//72(H++)/,4X,4A10,/,1X,+TDYNCG ENTERED AS ".13./.21X,+"BUT SHOULD BE ZERO (0), ONE (1). 9511 FORMAT(1X.//72(1H+)/.4X.4A10./.1X. 1015

+"IRECOV ENTERED AS "

TO ZERO(0)",/, 1X +\*IRECOV ENTERED AS ", I3./,21X, +\*BUT SHOULD BE IN THE RANGE O THRU 2",/.1X, 9521 FORMAT(1X, //72(1H+)/.4X.4A10./.1X.
+\*TRUPLOY ENTERED AS " F 10 4 /.21X.
+\*BUT SHOULD BE GREATER THAN OR EQUAL .72(111.)) 1020

9531 FORMAT(1X.,//72(1H+)/,4X.4A10./,1X. +"RECOVLL ENTERED AS ".F10 4./.21X. +"BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(0)"./.1X.

+72(111+))

1025

PAGE

```
9601 FORMAT(1X, //72(1H+)/, 4X, 4A10, /, 1X,
+*DRDRAG2 ENTERED AS ", F10 4, /, 21X,
+*BUT SHOULD BE GREATER THAN OR EQUAL TO ZERD(0)", /, 1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9616 FORMAT(1X.//72(1H+)/,4X,4A1O./.1X,
+"POROSD2 ENTERED AS ".F1O.4./.21X,
+"BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(O)"./.1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9621 FORMAT(1X,//72(11+)/,4X,4A10,/,1X,
+*VELCON ENTERED AS ",F10.4,/,21X,
+*BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(0)",/,1X,
                                                                                       9556 FORMAT(1X, //72(1H+)/, 4X,4A10,/, 1X,
+*POROSF ENTERED AS ",F10.4,/,21X,
+*BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(0)",/,1X
                                          +*BUT SHOULD BE GREATER THAN OR EQUAL TO ZERO(O)",/, 1X
                                                                                                                                                                                                                                                                                                                  9561 FORMAT(1X, //72(1H*)/,4X,4A10,/,1X,
+"NPTSRLS ENTERED AS " 13,/,21X,
+"BUT SHOULD BE IN THE RANGE 2 THRU 25",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                             9566 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+*NPTSROT ENTERED AS ", 13,/,21X,
+*BUT SHOULD BE IN THE RANGE 1 THRU 25"./.1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9581 FORMAT(1X, //72(1H*)/, 4X, 4A10./, 1X,
+*NPTSRFT ENTERED AS ", 13,/,21X,
+"BUT SHOULD BE IN THE RANGE 2 THRU 25",/, 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          +*NPIDET2 ENTERED AS ". 13,/,21X, **BUT SHOULD BE IN THE RANGE 2 THRU 25",/,1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9591 FORMAT(1x,//72(1H+)/,4x,4A10,/.1X.
+"IDROGUE ENTERED AS ", 13,/.21x,
+"BUT SHOULD BE IN THE RANGE O THRU 2"./.1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9611 FORMAT(1X,//72(1H*)/,4X,4A10,/,1X,
+"DROGPD2 ENTERED AS ",F10.4,/,21X,
+"BUT SHOULD BE GREATER THAN ZERO (0)",/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9571 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
+*IFTRECV ENTERED AS *, I3,/,21X,
+*BUT SHOULD BE ZERO (0) OR ONE (1)*,/,1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9631 FORMAT(1X,//72(1H+)/.4X,4A10,/.1X,
+"IFIDRO2 ENTERED AS ". 13./.21X,
+"BUT SHOULD BE ZERO (0) OR ONE (1)"./.1X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9636 FORMAT(1X,//72(1H+)/,4X,4A10,/,1X,
954; FORMAT(1x,//72(114+)/,4x,4A1O,/.1x,
+"RECDRAG ENTERED AS ",F10 4,/.21x.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           +72(111+))
                                                                                                                                                                                                                                                                                                                                                                                                       +72(111+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +72(111+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +72(111+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     +72(111+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              +72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +72(1H+))
                                                                                                                                                                                                                                                                                                 +72(1H+))
                                                                             +72(1H+)]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1075
                                                      1030
                                                                                                                                                                                                                                                                                                                               1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1055
                                                                                                                                                                                           1035
```

+72(111-1)

PAGF

1145

+"WGHIDG ENTERED AS ",F10 4,7,214, +"BUT SHOULD BE GREATER THAN OR FOUAL TO ZERO(O)",/,1x, +72(1H+)) 9751 FORMAT(1x,//72(1H+)/,4x,4A10,/,1x, +"CODG ENTERED AS ",F10.4,7,21x, +"BUT SHOULD BE GREATEP THAN OR EQUAL TO ZERO(O)",/,1x, +72(1H+)) 9990 FORMAT(1x,//,72(1H+)),/,4x,"RUN ABORTED",/,72(1H+)) END

5-133

E.

0

```
METHOD SETS THE FLAGS USED BY THE COMMON INTEGRATION PROCESS. IT CONTROLS THE TIME INCREMENTS.

AND SETS THE FLAGS USED BY THE COMMON INTEGRATION.

ROUTINE (INTEGRA).

METHOD - UPON ENTRY, THE TIME IS INCREMENTED IF NECESSARY.

THE ROUTINE THEN CALLS THE INTEGRATION ROUTINE FOR SEACH ARRAY BEING PROCESSED. THE ARRAY IS PASSED AS AN ARGUMENT TO ALLOW THE INTEGRATION ROUTINE FOR COMMON DATA AREA. AFTER EACH ARRAY IS PROCESSED, THE FLAGS ARE SET FOR THE NEXT PASS THROUGH THE INTEGRATION.

PROCESS. IF A FINAL VALUE HAS BEEN CALCULATED. THE PRINT FLAGS IS SET TO YES AND THE POINTS COUNTER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALLED BY: GESS
CALLS: INTEGIN
NON-COMMON VARIABLES DEFINED:
TIMEINC - FRACTION USED FOR INCREMENTING THE TIME DURING THE
RUNGE-KUTTA INTEGRATION PHASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                      , TRAJSO(193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . QUATSO(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . IRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IYPRI 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IPYIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I VPRX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 Y 1 2 X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C CALL INTEGRATION ROUTINE FOR EACH ARRAY BEING PROCESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                   . TRAJOA(193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . TVCEQS(225)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPCPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMON /RKUTTA / TIME , TIMES , DELTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DATA (TIMEINC(1),1=1,4)/0.5,0.0,0.5,0.0/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IV11X
IYPRIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IKSUMX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ICYI 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPYIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TIME = TIME+DELTAT+TIMEINC(IRKPASS)
GD TO 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200 IF (IPCPASS.NE 2)TIME = TIME+DELIAT
300 INTSTP = 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRAUSA( 193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRAJAC( 193)
                                                                                                                                                                                                                                                                                                                                                                                                          INTEGRATION ROUTINE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QUATSA(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (IPDINTS.GE.5) GO 10 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPDINTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IYPR12X
                                                                                                                                                                                                                                       IS INCREMENTED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IYI 3X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CYIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALL INTEGIN(TRAJSA(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALL INTEGIN(TRAJSO(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CALL INTEGIN(TRAJOA(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IYIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRKPASS # IRKPASS+1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIMENSION TIMEINC(4
                          DESCRIPTION - LEVEL 2
SUBROUTINE INTEG
                                                                                                                                                                                                                                                      COMMUNICATIONS
                                                                                                                                                                                                                                                                                                                                                                NON
             0000000000000000000
                                                                                                                                                                                                                                                      00000
```

52

90

35

0

45

50

55

20

ō

```
PAGE
                                                                                                             83/11/07. 09.41.53
CALL INTEGINITRAJCH(1,1)
CALL INTEGINITRAJCH(1,2)
CALL INTEGINITRAJCH(1,2)
CALL INTEGINITRAJCH(1,2)
CALL INTEGINITRAJCH(1,2)
CALL INTEGINICANTSO(1))
CANTRATEDIONIS OF THE TOTAL TOT
                                                                                                                                    SUBROUTINE INTEG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 75
                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
```

SUBROUTINE INTEGII	INTEG11 74/74	0PT=1		FIN 4.6+428	83/11/07. 09.41.53	09.41.53	PAGE
	:	_:	•		:		
w .	DESCRIPTION FUNCTION METHOD COMMUNICATIO CALLE	IPTION - LEVEL 3  NCTION - THIS SUBROUTINE INCREMENTS THE WORK ARRAY INDICES  TO POINT TO THE NEXT EQUATION BEING PROCESSED.  METHOD - EACH INDEX IS INCREMENTED BY ONE.  CALLED BY: INTEGIN INTEGMD  CALLED BY: MANE	IENTS THE WORK A Quatton Being F ITED BY ONE.	KRAY INDICES ROCESSED.	• • • • • •		
5	NON-	-COMMON VARIABLES DEFINED - NONE ENTIAL ERROR CONDITIONS - NONE	•		• • • • •		
و <del>ر</del> د د د	ž.	GGRATION ROUTINE COMMON BLOCK  COMMON /RKUTTA / TIME, TIMES, DELTAT  TRAJSO(193)  TRAJCO(193)	DELTAT	TRAUSO (193)	: • :		
20	+ + + + •	TRAJAC(193) QUATSA(65) INTSTP	TVCEOS(225) QUATOA(65) IPCPASS IYX	QUATSO(65) QUATAC(65) IRKPASS IYPRX			
52	++XIAL = XIA + + + +	1864 1918 19198 1998128 10718	I VI IX I VPRIX I PV IX I CV I 1X	INTERSTRY IVELIA IPVIIX IREIN			
90	×××	XX+1 XX+1 XX+1 XX+1 DD14x+					
38	IPPRIZE IPPRIZE I I	PRI2X+1  X+1  IX+1  XX+1  XX+1					
0	IVX = IVX+I IVPRX = IVPRX+1 IKSUMX = IKSUMX+1 IKX = IKX = IKX = IKX	1 YPRX+1 1 KSUEX+1 1 INDEX+1 1 INDEX+1					
ž.	RETURN						

PAGE 136

, (	DESCRIPTION	- LEVEL 3	3	ESCRIPTION - LEVEL 3
	NOT LONG	2 H 15		DEMO THE NUMERICAL INTEGRATION FOLIATIONS IN THE SYSTEM
, 0	METHOD	- THE FIRST PHA		SES THE GILLS
•		VARIATION OF	VARIATION OF THE RUNGE-KUTTA METHOD TO	THOD TO CALCULATE
J (	•	THE FIRST FOU	THE FIRST FOUR POINTS. FOR THIS PHASE.	FOUR PA
ب ر		DASS DESUED TO	NEEDED TO CALCULATE THE FINAL TESTIMATE.	ARE NEEDED TO CALCULATE THE FINAL TESTIMATE. EACH DASC DESULTS IN THE CALCULATION OF A K VALUE TO RE
		USED IN THE F	IN THE FINAL ESTIMATE. THE K	K VALUE IS THE
J		DERIVATIVE EV	DERIVATIVE EVALUATED AT A CERTAIN	IN Y VALUE. SINCE
J (	,,,	THESE VALUES	THESE VALUES ARE NEEDED IN FUTURE	RE PASSES, THEY GRE
J (		THE SECOND DHASE HEES TO	CECOMO DIASE USES THE HAMMING	NG BREDICTOR CEMBECTOR
ے ر		METHOD TO CALCINATE	CHIATE THE REMAINING	
		ARE NEEDED TO		VALUE IN THE
. 0		THE FIRST PASS	S EVALUATES THE PR	
J				Y VALUE CALCULATED IN THE MODIFIER
J		IS USED TO EVALUATE	ALUATE THE DERIVATIVE. THE	IVE. THE SECOND PASS
9		EVALUATES THE		AL-VALUE EQUATIONS
٠ ر		TO DETERMINE THE FINAL	THE FINAL ESTIMATE	DETERMINE THE FINAL ESTIMATE OF THE NEXT POINT.
ر ر		TE DIACED IN	U BE USED IN EVALU	ALING THE DEKLIVALIVE
ن ر		VALUES FROM P	IS PLACED IN THE WORK ARRAY BY THIS ROUTINE:	NEEDED IN THE
ن ر		PREDICTOR -CORRECTOR	RECTOR PHASE, THES	THESE VALUES ARE SAVED
, 0	. , .	IN THE WORK A	ACH TYF	EACH TYPE OF DATA IS GROUPED
U		TOGETHER. WIT	TOGETHER. WITHIN EACH GROUP ARE THE VALUES FOR	THE VALUES FOR
0		EACH EQUATION		THE FOLLOWING LIST
ں د		ASSOCIATED WITH 1T.		15 SAVED AND THE INDEX NAME
J				
0		DATA TYPE	INDEX NAME	ARRAY POS
ن ر		>	××I	-
, 0		. }-	IYPRX	۰ ۵
, 0		K VALUE	[KX	1 M
J			IKSUMX	•
J	•	K PASSED	IKPASSX	ស
٠		-	XIAI	(O)
٠ ر		_ ,	X1 1 X1	۰. (
J (		Y(1-2)	1712X 1×10x	<b>3</b> 0 0
<i>3</i> (		• •	×100>1	n Ç
, 0		-	IVPRIIX	<u>-</u>
, 0			I Y PR 12 X	. 2
U		_	IPYIX	13
O		P(1+1)	IPVIIX	4
U		C(I)	ICYIX	31
J		C(1+1)	1CY 1 1X	16
ن ر	COMMUNICATIONS	NS - SM		
ů		CALLS: INTEGST INT	INTEGII INTEGMO	
ی ن		E F		
، ر		AKKAY - CALL	CALL PAKAMETER USEU AS CUMMUN	S CUMMUN WORK AKEA

```
83/11/07. 09.41.53
                                                                                                                                                COMMON /RKUTTA / TIME , DELTAT , TRAUSD(193) , TVCEOS(225) , QUATSO(65) ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PERFORM RUNGE-KUTTA INTEGRATION
                                                                                            PERFORM HAMMING PREDICTOR -CORRECTOR INTEGRATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARRAY(IYX) = ARRAY(IYIX)+.16666666666667+DEL1AI+ARRAY(IKSUMX)
                                                                                                                                                                                                                            QUATAC(65)
FTN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ARRAY(1YX) = ARRAY(1Y1X)+ARRAY(1KPASSX)+
.29289321881345+DELTAT+ARRAY(1KX)
ARRAY(1KSUMX) = ARRAY(1KSUMX)+.58578643762690+ARRAY(1KX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ARRAY(IKSUMX) - ARRAY(IKSUMX)+3.4142135623731+ARRAY(IKX)
                                                                                                                                                                                                                                               IRKPASS
                                                                                                                                                                                                                                                                                     IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ARRAY(IPYIX) + ARRAY(IYI3X)+1 33333333333350ELTAT+ (2 0+ARRAY(IYPRIX)-ARRAY(IYPRIX)+2.0+ARRAY(IYPRI2X))
                                                                                                                                                                                                                                                                                                                          IYPRI 1X
                                                                                                                                                                                                                                                                                                                                           IPY I 1X
                                                                                                                                                                                                                                                                  IYPRX
                                                                                                                                                                                                                                                                                                       1Y12X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARRAY(1KPASSX) = .7071067811865+DELTAT+ARRAY(1KX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO TO (100,200,300,400)IRKPASS
ARRAY(IYX) = ARRAY(IYIX)+DELTAT=ARRAY(IKX)/2.0
                                                                                                                                                                                                                          . QUATOA(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARRAY(IKPASSX) = .2071068+DELTAT+ARRAY(IKX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IF (IRKPASS.EQ.1) CALL INTEGMD(ARRAY(1))
CALL INTEGSI(ARRAY(1))
DO 1000 IEQNUM = 1,INUMEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300 ARRAY(1YX) = ARRAY(1YIX)-ARRAY(1KPASSX)+
+ 1.7071667811865*DELTAT*ARRAY(1KX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000 IF (IPCPASS.NE 2) CALL INTEGMD(ARRAY(1)) CALL INTEGSI(ARRAY(1))
                                                                                                                                                                                                                                               IPCPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                400 ARRAY(IKSUMX) = ARRAY(IKSUMX)+ARRAY(IKX)
                                                                                                                                                                                                                                                                                   IKSUMX
                                                                                                                                                                                                                                                                                                                          IYPRIX
                                                                                                                                                                                                                                                                                                        IYIIX
                                                                                                                                                                                                                                                                                                                                           IPYIX
                                                                                                                                                                                                                                                                                                                                                                                                   IF (ARRAY(1) .EQ. 0) GG TG 9000
                                                      QUATSA(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                    IF (IPDINTS.GE.5) GO 10 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2100 IF (IPCPASS.EQ.2) GO TO 2200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARRAY(IKSUMX) = ARRAY(IKX)
                                                                                                                                                                                                                                             INTSTP
                                                                                                                                                                                                                                                                                                                                           IYPR12X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARRAY (IKX) = ARRAY (IYPRX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DO 3000 TEONUM # 1, INUMEO
                                                                                                                                                                                                                                                                                                                                                               ICVIX
                                                                                                                                                                                                                                                                                                                          1Y13X
                                                                                                                                                                                                                                                                                                                                                                                  DIMENSION ARRAY (225)
 0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                     INUMEQ = ARRAY(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALL INTEGIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO TO 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO TO 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60 10 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6010 9000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1000 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ ပ
                                                                                                ၀ွ
                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                  75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100
```

```
138
PAGE
83/11/07. 09.41.53
  FTN 4.6+428
     74/74 OPT=1
     SUBROUTINE INTEGIN
```

ARRAY(1VX) = ARRAY(1PVI1X)-(112.0/121.0)+
+ (ARRAY(1PVIX)-ARRAY(1CVIX))
G0 T0 3000
2200 ARRAY(1V1X) = .125+(9.0+ARRAY(1V1X)-ARRAY(1V12X)+3.0+DELTAT+
+ (ARRAY(1VPRX)+2.0+ARRAY(1VPRIX)-ARRAY(1VPRI1X))
ARRAY(1VX)=ARRAY(1CY11X)+(9.0/121.0)+(ARRAY(1PYI1X)-ARRAY(1CY11X))
1F (1PCPASS.EQ.0) 1PCPASS = 1
E1 (1PCPASS.EQ.0) 1PCPASS = 1
E1 (1PCPASS.EQ.0) 1PCPASS = 1

120

115

5-139

ARRAY(IYPRIZX) = ARRAY(IYPRIXX) ARRAY(IYPRIXX) = ARRAY(IYPRIX)

50

ARRAY(IYPRIX) = ARRAY(IYPRX) ARRAY(IPYIX) = ARRAY(IPVIIX) ARRAY(ICYIX) = ARRAY(ICYIIX)

CONTINUE

8

SUBROUINE INTEGSTICKRAY)  DESCRIPTION - LEVEL 3  FUNCTION - HIS SUBROUINE SETS THE WORK ARRAY INDICES USED  WETHOD - EACH INDEX IS SET TO ITS INITIAL VALUE BASED ON  THE FOLLOWING EQUATION:  INITIAL VALUE = (x-1)*NUMEQ+1  WHERE X IS THE POSITION DF THE DATA IN THE ARRAY.  COMMUNICATIONS - EACH INDEX IS SET TO ITS INITIAL VALUE BASED ON  THE FOLLOWING POLITIONS - EACH INDICES OF THE DATA IN THE ARRAY.  COMMUNICATIONS - EACH INDICES VARIABLE TO SAVE NUMBER OF EQUATIONS  INVEGRATION WARRABLES DEFINED - INTEGRAL WARRAY  FOTENTIAL ERROR COUNDITIONS - INVEGRATIONS  WON-COMMON / RKUITA / TIME ; TRAJUNIC(93) TRAJUN(973)  TRAJUNIC(93) TRAJUNIC(94) TRAJUNIC
--

SUBROUTINE INTLZ	INILZ	14/14	0PT = 1		FIN 4.6+428	83/11/07, 09.41 53	09.41.53	PAGE	4
-	SUBRO	SUBROUTINE INTLZ	47.2	ROUTINE INTLZ	•	:			
	DE SCR	METHOD - EVEL 2 METHOD - EXECUTES SPECIFIC	VEL 2 VTROLS CUTES ECTFIC	LEVEL 2 CONTROLS INITIALIZATION EXECUTES A SERIES OF CALLS TO SUBROUTINES CONTROLLING SPECIFIC INITIALIZATION FUNCTIONS	OUTINES CONTROLLING				
, , ,		CALLED BY	/ . GE SS			••			
0	o n	CALLS	S: AEROIN	2.0		• • •			
. <b>.</b> .	<b>ပ ပ</b> ပ		CLEAK INITMS	CLEAR INITMS INITRAU					
	<b>.</b> .		INIVECT INIVEGE INPUT REPORTS	FECT RREL IT				,	
20000	NON-COM	MON VARIABLES DEFINE NONE AL ERROR CONDITIONS: NONE	REPRIS BLES DEF NONE CONDITION	MON VARIABLES DEFINED: NONE NONE AL ERROR CONDITIONS:					
SO CO	हें हैं हैं इंड हैं डे हैं	CLEAR INPUT INIVRBI AEROIN							
30	CALL IN CALL IN CALL RE CALL RE RETURN	INIVECT INITRAJ REPRT 1 REPORTS							
35	ENO								

PAGE

		10.41.	T TON OF T	FINCTION OF TWO DO THREE VARIABLES
	CONTACT		5	שם כא בוארי יחוייחניילי
	C	<u>۳</u>		IS NEWTON"S FIRST ORDER INTERPOLATION.
		IT IS NECESSARY		IS NECESSARY TO LOCATE THE FOUR SEGMENT POINTS REQUIRED DEDECOM THE INTERPOLATION IN THE TWO-WAY CASE, DO THE
	. w	1GHT POIN	ITS REQUIR	CASE. THI
		CCOMPLIS	ED BY DET	G
	<b>≯</b>	HERE 1 S	TISFIES	WHERE I SATISFIES THE CONDITION X(I) O= V1 O= X(1+1); U
		ATISFIES	SATISFIES V(J) OF V2	SATISFIES Y(J) O= V2 O= Y(J+1); AND K SATISFIES
	<b>,</b> Z	NEWTON'S FORMULA	ORMULA	י ווכסכ אשרמרס שער יוורא ססרם
		NOTE	NOTE RESTRICTIONS	
	U	· .	V2, AND V3 MUST	MUST APPEAR WITHIN THE BOUNDS OF THE
		TABLE.		
	COMMO	- SN01		
	C CALLED BY	•		
	o i	AE	AERFMSA	
	ט נ		AERFMSU	
		CALLS :	Ļ	
	ي ر	NON	<u>u</u>	
	C NON-COMMON VARIABLES DEFINED	VARIABLE	S DEFINED	•
-		OCDEFF -	THE BEGI	BEGINNING OF THE COEFFICIENT ARRAY.
•		OFD .	Ŧ	X-POINTS (INTEGER).
•		oso .	HE I	Y-POINTS
		ODL 111	- THE ARRA	ARRAY NAME THAT CONTAINS THE
	U 4		INCREMEN	INCREMENTS FOR THE INDEPENDENT VARIA-
	U ŧ		BLES (REAL).	
	ى ر			QUELIT(1) CONTAINS DELIA A.
	ى ر		0011110	CONTAINS DELTA
		, 1510		THE NAME OF THE ADDAY CONTAINING THE END
		-	POINTS	POINTS OF THE INDEPENDENT VARIABLES (REAL).
			0151(1)	CONTAINS X(1)
	U		5	×
	S		0151(3)	
-	Ç		0151(4)	Σ
	J			
			0151(6)	
		OTYP .	TYPE OF	(INTE
	O.		1. 16	INTERPOLATION IS A FUNCTION OF TWO
	ں د			
	o (		= 2, IF	IF INTERPOLATION IS A FUNCTION OF THREE
	د د		7 201	VARIABLES.
•			1 1	V TABLE CNIR!
	<  <	, ,	ij	7 TARIF ENTRY
		IVAI	ij	TED COFFETCIEN
	,		7 N T	THE THIERTON OF TOTAL CHEST.

## NADC-84068-60

```
143
PAGE
83/11/07 09 41 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C DE TRAINE THE INDEX TO THE 1ST TOTABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C TEST IF A FUNCTION OF 2 VARIABLES ONLY
C
                                                                                                                                                                                                                                                                                                                                                                                                                ******************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contract ( )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF (VI.GE. QISI(I) AND, VI.LE. QISI(2)) GDTD 100
100T = 1
                                                                                                                                                                                                                                                                                                                                          110 IF (OTYP EQ. 1) GOTO 120
IF (V3 .GE. 0151(5) .AND V3 .LE Q151(6)) GOTO 120
10UT * 3
                                                                                                                                                                                                                                                                                                      V2 (E. Q15;(4)) G010 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OR=(VI-(QIC+1)+(FLOAT(QI-1))+QDLIII(1)))/QDLIII(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07=(V3 (0151(5)+(FLOAT(QK 1))+QDLTII(3)))/QDLTII(3)
                                    - VI, V2, V3 WITHIN TABLE LIMITS
V1 OUISIDE TABLE LIMITS
- V2 OUISIDE TABLE LIMITS
V3 OUISIDE TABLE LIMITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF (QT EQ.QFD. AND.QJ.EQ.QSD. AND QK EQ.QTD) GO TO 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DETERMINE THE INDEX FOR THE 3RD VARIABLE.
                                                                                                                                                   DIMENSION OCCEFF(QFD, QSD, QTD), QDL 111(3) Q151(6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE THEX FOR THE 2ND VARIABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INTERPOLATE THE FUNCTION, F(X,Y,Z)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QK=1+1F1X((V3-Q1S1(5))/QDLT11(3))
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q1=1+1F1X((V1 Q1S1(1))/QDLT11(1))
                                       C POTENTIAL ERROR CONDITIONS . C NONE
                                                                                                                                                                                                                                                                                                      GE 0151(3) AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11 (OTVP.EQ.1) GO 10 10
                                                                                                                                                                              INTEGER OTYP, QU. JI, QK
INTEGER OFD, OSD, OTD
 0PT:1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DETERMIT
 14/14
                                                                                                                                                                                                                       REAL INTVAL
                                                                                                                                                                                                                                                                                                                    1001 = 2
                                                                                                                                                                                                                                                 1001 = 0
                                                                                                                                                                                                                                                                                         GO 10 30
                                                                                                                                                                                                                                                                                                                                G0 T0 30
                                                                                                                                                                                                                                                                                                                                                                                                    120 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                      G0 T0 30
                                                                                                                                                                                                                                                                                                        1F (V2
                                                                                                                                                                                                                                                                                                         $
                                                                    9
                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                      65
                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                                                                                                                  85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

```
4 4
PAGE
83/11/07, 09.41.53
                               FIN 4.6+428
                                                                      G010 30
20 INTVAL=QCOEFF(Q1,QJ,QK)
30 RETURN
END
                 7 QCDEFF(Q1,QJ,QK)
G010 30
74/74 OP1:1
SUBROUTINE INTRP
                   5
                                                    120
                                                                                    125
```

SUBROUTINE LADDATE	LADDATE	74/74	1 = 1 d0	-	FIN 4 6+428	83/11/07 09 41 53	09 41	53	PAGE	145
-	SUBROL 		DDATE(	JIINE LADDATE(IDATE) 	•	••				
<b>Б</b>	FU	0N - DETE 10D - OBTA 1TIONS - 1ED BY: 1NI	ETERMINE BTAIN PR	INCTION - DETERMINE PRESENT DATE IN THE FORM OD MON VY METHOD - OBTAIN PRESENT DATE FROM SYSTEM AND ENCODE IT NICATIONS - CALLED BY: INIVRBL	ENCODE IT	• • • • •				
0	NON-CO MO	<b>*</b> * •	NONE BLES DE AY CONT ODED MO	S: NONE RIABLES DEFINED - ARRAY CONTAINING ENCODED MONTHS FOR PRINTOUT DECODED MONTH : INDEX INTO MONTHS ARRAY	PRINTOUT RAY					
2 0 0	٥		DECODED YEAR DECODED DATE ROR CONDITIONS NONE	EAR ATE 10NS ·						
20 20	INTEGE DATA CALL C		S( 12). 3HJAN 3HJUL,	INTEGER MONTHS(12), DAY, MONTH, YEAR DATA MONTHS/ 3HJAN, 3HFEB, 3HMAR, 3HAPR, 3HMAY, 3HJUN, 3HJUL, 3HAUG, 3HSFP, 3HNGY, 3HBEC / CALL DATE(0)	AY, 3HJUN,	•				
<b>2</b> 5	DECODE  IF (DA  IF (DA  IF (DA  101 FORMAT	MAY . GE. 11 AAY . GE. 11 AAY . LT. 11 N 11 (1X. 12. 12. 13. 13. 13. 13. 13. 13. 13. 13. 13. 13	(0) EN (0) EN (0) EN (0) EN	DECODE (9, 101,D) YEAR, MONTH, DAY  IF (DAY .GE. 10) ENCODE(10 102.10ATE) DAY. MONTHS(MONTH). YEAR  IF (DAY .LT. 10) ENCODE(10, 103, IDATE) DAY. MONTHS(MONTH), YEAR  RETURN  FORMAT (1x, 12, 1x, 12, 1x, 12)  FORMAT (12, 1x, 23, 1x, 12, 1x)	VINS(MONTH), YEAR VIHS(MONTH), YEAR					
30	103 FDRMAT END		¥3. 1×	(II. IX, A3. IX, I2, 2X)						

```
147
  PAGE
83/11/07 09 41.53
FIN 4 6+428
                     D0 350 1*{,3

D0 350 J*1,3

C(1,J) = 0.0

D0 350 K*1,3

C(1,J) * C(1,J) + A(K,I) * B(K,J)

CONTINUE

RETURN
                                                                                                                           DO 450 1=1,3
DO 450 J=1,3
C(1,J)= 0.0
C(1,J)= C(1,J) + A(K,I) + B(J,K)
CONTINUE
74/74 OPT=1
                                                                                     CONT INUE
                                                                                                            KODE ≠ 4
                                                                                                                                                                                  RE TURN
END
SUBROUTINE MATRIX
                                                                           ္ကန္ ၁ ၁ ၁ ၁
                                                                                                                                                                   450
C
                                     9
                                                                             65
                                                                                                                    20
                                                                                                                                                           75
```

SUBROUTINE MATUPD (Q, DCM)

```
C DESCRIPTION - LEVEL 3

C DESCRIPTION - LEVEL 3

C METHOD - SUBBOUTINE MATURE OF CALCULATE A NEW 3 X 3

C COMMUNICATIONS - TRANSFORMATION MATRIX

C CALLED BY - TRUPDAT

C CALLED BY - CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <del>-</del> - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DIMENSION DCM(3,3),Q(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             000= Q(1)

001= Q(1)

002= Q(1)

012= Q(2)

013= Q(2)

013= Q(2)

023= Q(3)

0CM(1,1)= 2

0CM(1,2)= 2

0CM(1,2)= 2

0CM(1,3)= 2

0CM(2,1)= 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ပ
                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50
```

RE TURN

C DESCRIPTION - LEVEL 2  C METHON - CALCOLATE DECUPANT ALONE TRAJECTORY PARAMETERS  FUNCTION - CALCOLATA ALONE FOUNTIONS OF MOTION ARE COMPUTED  FROM SEAT/OCCIDANT SEPARATION TO IMPACT  C GENAMUL INFORMATIC AND RECOVERY CHUTE FORCES ALONE FORCE SALONE FOR COMMUNICATIONS  C CALLED BY:  C CALLED BY:  C CALLED BY:  C CALLED BY:  C CALLS AFRENDA CHUTES  C NON COMMON VARIABLES DEFINED  C NON COMMON VARIABLES DEFINED  C NON COMMON VARIABLES DEFINED  C TOOR  TIOD - FY - COMPONENTS OF SUMMED AERODYNAMIC AND PARACHUTE  TOO - TOOR  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C CONSTANT A TATROS  + TRADE  C COMMON / DENSITY / GRAVITY RADDE  C CONSTANT A ONE FREAL(3) OLDALT(3)  C CCCUPANT A ONE FORCES COMMON BLOCK  C OCCUPANT A ONE FORCES COMMON BLOCK  C OCCUPANT A ONE FORCES COMMON BLOCK	ATE OCCUPANT ALONE TRAJECTORY PARAMETER NT ALONE EQUATIONS OF MOTION ARE COMPUT NAMIC AND RECOVERY CHUTE FORCES ACT ON NT ALONE. FORCES AND MOMENTS ARE SUMME NEAR ACCELERATIONS ARE CALCULATED IN TH FIXED CODRDINATE SYSTEM.  AERFMOA, CHUTES OFFINED: PREVIOUS ALTITUDE OF OCCUPANT ALONE ENTS OF SUMMED AERODYNAMIC AND PARACHUT ORCES  ENTS OF SUMMED AERODYNAMIC AND PARACHUT OMENTS.  ITIONS: NONE  CK  CK  CK  CK  CG  CG  CG  CG  CG  CG	DNE TRAJECTC DNS OF MOTIC ERY CHUTE FG ES AND MOMEN ONS ARE CALC E SYSTEM.  S S S AERODYNAMIC	ALONE TRAJECTORY PARAMETERS TIONS OF MOTION ARE COMPUTED SEPARATION TO IMPACT. OVERY CHUTE FORCES ACT ON THE RCES AND MOMENTS ARE SUMMED. TIONS ARE CALCULATED IN THE ATE SYSTEM. D AERODYNAMIC AND PARACHUTE  D AERODYNAMIC AND PARACHUTE  RADDEG , DEGRAD , PT	METERS OMPLIED T ON THE SUMMED, IN THE ACHUTE	
C COMMUNICATION - CALCULATE OCCU C METHOD - OCCUPANT ALONE C ACCUPANT ALONE C COMMUNICATIONS - C CALLS: C CALLS	UPANT ALONE I E EQUATIONS C UPANT SEPARAT ND RECOVERY C E. FORCES AN CELERATIONS A CORDINATE SYS OORDINATE SYS OUR ALTITUDE C SUMMED AEROC NONE	TRAUECTC  SHUTE FG  SHUTE FG  SHUTE FG  STEM.  STEM.  SYNAMIC  SYNAMIC  STEM.	RRY PARAME INPACT: RECES ACT ( ITS ARE SUI ULATED IN AND PARACI	UTE THE THE THE THE THE THE THE THE THE T	
C CONSTANTS COMMON BLOCK C COMMON VARIABLES DEFINED C CLED BY: C CALLED BY: C CALLE	UPANT SEPARATIONS OF ECUCERY OF ECUCERY OF ECUCERY OF ECUCERY OF ECUCERY OF ECUCERY OF ECUCERATIONS A. CHUTES OF ECUCERATIONE	JE DECUPE CALCESTEM.	AND PARACT THPACT. RCES ACT OF SULATED IN CULATED IN PARACT AND PA	AUTE AUTE AUTE	* * * * * * * * * * * * * * * * * * *
C COMMON / CONSTANT ALONE C COMMUNICATIONS C COMMUNICATIONS C COMMUNICATIONS C CALLED BY: C CALL	E EQUATIONS CUPARAIN SEPARAIN SEPARAIN SECOVERY CELERATIONS A CORDINATE SYSON ALTITUDE COSUMMED AEROC SUMMED AEROC NONE	TION TO	AND PARE COME TARGES ACT TO THE STATE TO THE SUM TO THE	AMED. THE THE TUTE	
C COMMUNICATIONS - C COMMUNICATIONS - C COMMUNICATIONS - C CALLED BY: C CALLED BY: C CALLED BY: C CALLED BY: C CALLES ATMOS, AERFMOD C OLDALT(2) - LATEST PREVIOUS FY - COMPONENTS OF FEMALE OF FEMAL	UPANT SEPARAT ND RECOVERY E. FORCES AN CELERATIONS A OORDINATE SYS OUS ALTITUDE C SUMMED AEROC NONE  TY RADDECT TY RADDEC	TION TO THUTE FOUNDER FOUNDER CALCUP TEM.  STEM.  SYNAMIC  SYNAMIC  SYNAMIC  STEM.  STEM.	IMPACT. RCES ACT INS ARE SUI SULATED IN AND PARAC! AND PARAC! EGRAD	AMED. THE THE TUTE	9
C COMMUNICATIONS C CALLED BY: C	ND RECOVERY CELERATIONS ACELERATIONS ACCELERATIONS ACCELERATIONS ACCELERATIONS ACCELERATION OF SUMMED AEROCONOME	STEM.  STEM.  STEM.  SYNAMIC  SYNAMIC  SYNAMIC  SYNAMIC  SYNAMIC  SYNAMIC  STEM.  STEM	AND PARAC! AND PARAC! AND PARAC! AND PARAC!	AMED. THE THE TUTE	
COMMUNICATIONS - COMMUNICATIONS - COMMUNICATIONS - COLLED BY: COLDALTS: COLDALTS: COLDALTO - LATEST PREVIOUS COLDANT LEROR CONDITIONS: COLDALTO - MOMENTS COLDANT LEROR CONDITIONS: COLDAND / CONSTANT / GRAVIT COLDAND / CONSTANT / GRAVIT COLDAND / DENSITY / IATMOS COCUPANT ALONE FORCES COMMON	E. FORCES AN CELERATIONS A CORDINATE SYSON OF SUMMED AEROD SUMMED AEROD NONE	TEM.  STEM.  STEM.  SYNAMIC  S	ANT ALONE AND PARACI AND PARACI AND PARACI AND PARACI AND PARACI	4UTE 4UTE 4UTE 7 P 1	
C COMMUNICATIONS - C CALLED BY: C CALLED BY: C CALLES ATMOS, AERFMOD C OLDALT(2) - LATEST PREVIOU C OLDALT(2) - LATEST PREVIOU C FY - COMPONENTS OF C TNOA - COMPONENTS OF C COMMON / DENSITY / IATMOS C C C C C C C C C C C C C C C C C C C	A. CHUTES B.: CHUTES D.: SUMMED AEROC NONE TY RADDEC	TEM.  STEM.  SYNAMIC  SYNAMIC  SYNAMIC  STEM.  STEM	AND PARAC! AND PARAC! AND PARAC! EGRAD	THE HUTE	9
C COMMUNICATIONS - C CALLED BY: C CALLED BY: C CALLED BY: C CALLED BY: C CALLES BEFFMOA C NON-COMMON VARIABLES DEFINED C CLDALT(2) - LATEST PREVIOU C FX - COMPONENTS OF C TNOA - COMPONENTS OF C CONSTANTS COMMON BLOCK C COMMON / DENSITY / 1ATMOS C C CCUMMON / DENSITY / 1ATMOS C C C C C C C C C C C C C C C C C C C	CELERATIONS A CORDINATE SYS  D: CHUTES  DS ALTITUDE C SUMMED AEROD  SUMMED AEROD  NONE  TY RADDEC	TEM.  TEM.  TEM.  TOCUP  TOCUP	ANT ALONE AND PARAC! AND PARAC!	THE 40 TE 40 TE 70	
C COMMUNICATIONS - C CALLED BY: C CALLS: C C CALLS: C C CALLS: C C CALLS: C C C C C C C C C C C C C C C C C C C	A. CHUTES D: US ALTITUDE C SUMMED AEROC NONE TY RADDEC	TEM.  DYNAMIC  DYNAMIC  DYNAMIC  TEM.	ANT ALONE AND PARAC! AND PARAC! FGRAD	-ture -ture - pri	
C CALLED BY: C CALLES C CALLS: C CALLS: C AIMOS, AERFMOA C OLDALT(2) - LATEST PREVIOU C FY - COMPONENTS OF C FY - COMPONENTS OF C TWOA -	A, CHUTES D: US ALTITUDE C SUMMED AEROC NONE TY RADDEC	DYNAMIC DYNAMIC DYNAMIC TO THE T	ANT ALONE AND PARAC! AND PARAC! EGRAD	4UTE HUTE	
CALLES BY:  CALLS:  CALLS:  CALLS:  CALLS:  CALLS:  TATOS, AEFFNDA  COLDALT(2) - LATEST PREVIOU  FX - COMPONENTS OF  FY - COMPONENTS OF  THOA - MONENTS OF  THOA - MONENTS OF  CONSTANTS COMMON BLOCK  CONSTANTS COMMON BLOCK  COMMON /CONSTANT / GRAVIT  COMMON /CONSTANT / GRAVIT  COMMON /DENSITY / IATMOS  COMMON /DENSITY / IATMOS  COMMON /DENSITY / IATMOS  COCCUPANT ALONE FORCES COMMON	A, CHUTES D: US ALTITUDE C SUMMED AEROC NONE TY RADDEC	DYNAMIC DYNAMIC DYNAMIC	ANT ALONE AND PARAC! AND PARAC! EGRAD	4UTE 4UTE 7 P 1	
C CALLED BY:  C CALLS:  ATMOS, AERFHUDA  C OLDALT(2) - LATEST PREVIOU  C CLDALT(2) - LATEST PREVIOU  C FY - COMPONENTS OF  C TNOA - COMPONENTS OF  TNOA - COMPONENTS OF  C TNOA - COMPONENTS  C ONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COCUPANT ALONE FORCES COMMON  C C CCCUPANT ALONE FORCES COMMON	A, CHUTES D: US ALTITUDE C SUMMED AEROC NONE TY RADDEC	DYNAMIC DYNAMI	AND PARACIAND PA	HUTE HUTE	
C CALLS:	A. CHUTES D: US ALTITUDE C SUMMED AEROD SUMMED AEROD NONE TY RADDEC	DYNAMIC DYNAMIC DYNAMIC TO THE TENT TO THE	AND PARAC! AND PARAC! AND PARAC!	HUTE HUTE	** * * * * * * * * * * * * * * * * * * *
C CALLS:  ATMOS, AERFMOA  C DALT(2) - LATEST PREVIOU  C DLDALT(2) - LATEST PREVIOU  C FY - COMPONENTS OF  THOA - COMPONENTS OF  THOA - COMPONENTS OF  THOA - COMPONENTS OF  C CONSTANTS COMMON BLOCK  C COCCUPANT ALONE FORCES COMMON  C C CCCUPANT ALONE FORCES COMMON	A, CHUTES D: US ALTITUDE C SUMMED AEROC NONE TY , RADDEC	DYNAMIC DYNAMIC DYNAMIC	AND PARACI AND PARACI AND PARACI EGRAD	HUTE HUTE	* * * * * * * * * * * * * * * * * * *
C NON-COMMON VARIABLES DEFINED C OLDALT(2) - LATEST PREVIOU C FX - COMPONENTS OF C TADA - COMPONENTS OF C TATA - C	A, CHUTES DS ALTITUDE C SUMMED AEROC SUMMED AEROC NONE TY RADDEC	DYNAMIC DYNAMIC DYNAMIC THE STATE ST	AND PARACI AND PARACI AND PARACI SEGRAD	4UTE 4UTE	
C OLDALT(2) - LATEST PREVIOUS C OLDALT(2) - LATEST PREVIOUS C FY - COMPONENTS OF C TLOA - MOMENTS OF C TNOA - COMPONENTS OF C TNOA - MOMENTS OF C TNOA - MOMENTS C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON /CONSTANT / GRAVIT C DENSITY COMMON BLOCK C COMMON /DENSITY / IATMOS C OCCUPANT ALONE FORCES COMMON	SUMMED AEROC SUMMED AEROC NONE	DYNAMIC DYNAMIC DYNAMIC	AND PARAC! AND PARAC! AND PARAC! EGRAD	4UTE 4UTE P P 1	
C OLDALT(2) - LATEST PREVIOU  C FX - COMPONENTS OF  C FY - COMPONENTS OF  C TADA - COMPONENTS OF  TADA - COMPONENTS OF  TADA - COMPONENTS OF  C TADA -	DS ALTITUDE C SUMMED AEROC SUMMED AEROC NONE TY RADDEC	OYNAMIC OYNAMIC OYNAMIC	AND PARAC! AND PARAC! AND PARAC! EGRAD	4UTE 4UTE	
C OLDALT(2) - LATEST PREVIDUE C FY - COMPONENTS OF C TADA - FORCES C TADA - COMPONENTS OF TNOA - COMPONITIONS: C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C	SUMMED AEROD SUMMED AEROD NONE TY RADDEC	OVNAMIC OVNAMIC OVNAMIC	AND PARACH AND PARACH AND PARACH EGRAD	4UTE 4UTE 7 P 1	
C FY - COMPONENTS OF  C TODA - COMPONENTS OF  C CONSTANTS COMMON BLOCK  C CONSTANTS COMMON BLOCK  C COMSITY COMMON BLOCK  C COMMON / DENSITY / IATMOS  C COMMON / DENSITY / IATMOS  C COMMON / DENSITY / IATMOS  C COCCUPANT ALONE FORCES COMMON	SUMMED AEROC NONE	YNAMIC YNAMIC	AND PARACI	HUTE HUTE	
C FY - COMPONENTS OF FZ - FORCES C TLOA - COMPONENTS OF TNOA - COMPONENTS OF TNOA - COMPONENTS OF C FOLENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C COMMON / DENSITY / IATMOS C DENSITY COMMON BLOCK C COMMON / DENSITY / IATMOS C COCCUPANT ALONE FORCES COMMON	SUMMED AEROC SUMMED AEROC NONE	YNAMIC YNAMIC	AND PARAC! AND PARAC! SEGRAD	4UTE 4UTE	
C FY - COMPONENTS OF C TLOA - COMPONENTS OF C TNDA - MOMENTS C TNDA - MOMENTS C TNDA - MOMENTS C CONSTANTS COMMON BLOCK C COMMON / CONSTANTS C DENSITY COMMON BLOCK C COCCUPANT ALONE FORCES COMMON C OCCUPANT ALONE FORCES COMMON	SUMMED AEROC SUMMED AEROC NONE TY RADDEC	OVNAMIC OVNAMIC OVNAMIC	AND PARACI	4UTE 4UTE P P 1	
C THOA - COMPONENTS OF THOA - COMPONENTS OF THOA - COMPONENTS OF C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C COMMON / DENSITY / IATMOS THE PRESALT THE PRE	SUMMED AEROC NONE	VNAMIC	AND PARACI	4UTE	
C DOTENTIAL ERROR CONDITIONS: C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C DENSITY COMMON BLOCK C COMMON / CONSTANT / GRAVIT C DENSITY COMMON BLOCK C COMMON / DENSITY / IATMOS C DENSITY COMMON BLOCK C C C C C C C C C C C C C C C C C C C	SUMMED AEROC NONE	OVNAMIC S	AND PARACI	4UTE	
C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C COMMON / DENSITY / IATMOS C COMMON / DENSITY / IATMOS C COCCUPANT A LONE FORCES COMMON	SUMMED AEROC NONE	VNAMIC 3	AND PARACI	HUTE	
C TMDA - COMPONENTS OF C TNDA - MOMENTS C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C DENSITY COMMON BLOCK C COMMON /DENSITY / IATMOS C DENSITY COMMON BLOCK C C C C C C C C C C C C C C C C C C C	SUMMED AEROL NONE TY RADDEC	VNAMIC 1 1 1 1 1 1 1	AND PARACI	101E	
C POTENTIAL ERROR CONDITIONS: C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C DENSITY COMMON BLOCK C COMMON /CONSTANT / GRAVIT C DENSITY COMMON BLOCK C COMMON /DENSITY / IATMOS C COCCUPANT ALONE FORCES COMMON	NONE	(9)	PEGRAD		
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C C C C C C C C C C C C C C C C C C C	NONE TY RADDEC	7 (3)	FGRAD		
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C COMMON / DENSITY / IATMOS C COCCUPANT ALONE FORCES COMMON	TY RADDEC	(6)1	FGRAD		
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C COMMON / DENSITY / IATMOS C COCCUPANT ALONE FORCES COMMON	TY RADDEC	(6)	EGRAD		
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GRAVIT C C C C C C C C C C C C C C C C C C C	TY . RADDEC	1(3)	DEGRAD		
C CONSTANTS COMMON BLOCK C COMMON /CONSTAT / GRAVIT C DENSITY COMMON BLOCK C COMMON /DENSITY / IATMOS C C C C C C C C C C C C C C C C C C C	TY RADDEC	1(3)	SEGRAD		
COMMON / CONSTNT / GRAVIT COMMON / CONSTNT / GRAVIT COMMON / DENSITY / TATMOS  COMMON / DENSITY / TATMOS  TEMPS  WXWIND COCCUPANT ALONE FORCES COMMON	TY , RADDEC	1(3)	EGRAD	10	
COMMON /CONSINT / GRAVIT C COMMON /CONSITY / IATMOS COMMON /DENSITY / IATMOS + TEMPS + TEMPS C CCCUPANT ALONE FORCES COMMON	TY RADDEC	1(3)	EGRAD	14	
COMMON / CONSTNT / GRAVIT CONSTIT COMMON BLOCK CONSTIT COMMON BENGE COMMON / DENSITY / IATMOS  + PRESAL  TEMPS COCCUPANT ALONE FORCES COMMON	TY RADDEC	T(3)	JEGRAD	Id	
C OCCUPANT ALONE FORCES COMMON		1(3)		*****	
C DENSITY COMMON BLOCK C.COMMON /DENSITY / IATMOS COMMON /DENSITY / IATMOS + TEMPS + TEMPS C.CCUPANT ALONE FORCES COMMON	•	* (7)	•		
COMMON /DENSITY / IATMOS COMMON /DENSITY / IATMOS PRESAL TEMPS COCUPANT ALONE FORCES COMMON	***********	* (7)	********		
COMMON /DENSITY / IATMOS  PRESAL  TEMPS  VXWIND  COCCUPANT ALONE FORCES COMMON		<b>.</b>		********	
CUMMUN / DENSITY / INTROSE + TEMPS + TEMPS COULDANT ALONE FORCES COMMUN		•			
PRESAL  TEMPS  TEMPS  VAWIND  COCCUPANT ALONE FORCES COMMON					
C OCCUPANT ALONE FORCES COMMON	LT(3) . OTEMP	•	RHOS		
C.C.C.UPANT ALONE FORCES COMMON	•				
C OCCUPANT ALONE FORCES COMMON	CALMAN	ç	UNIMEN		
C OCCUPANT ALONE FORCES COMMON					•
C OCCUPANT ALONE FORCES COMMON					
	N BLOCK				
			*********	*******	:
COMMON / FORCEOM / EXCHOA(3)	A(3) EVENIAGA(3)	(3)	F ZCHOA (3)		
	A EVAEDA		EZAEDA	_	
				***	
C SECTION 6 COMMON BLUCK					
	:	* * * * * * * * * * * * * * * * * * * *	• • • • • • • •	•••••	•
COMMON / ISEATOC / IPCNIL		vcGSD	. 20650	IXXSO	
1XYSO	-	1 Y Y S O	1 1 2 5 0	12250	
+ AREASO	O . AREADA .	WGHTOAB	WGHTDAA		
ACXXI.	IXYDA	IX20A	IYYOA	IVZOA	
40241	•	4000	1000	COCED	
10774				2	
nsi o		0350			
-	•	C30 <b>A</b>	. C40A		
REAL 1XXSO	. 1xYSO	1×250	1 7 7 50	17250	
+ 17280	TXXOA	IXVOA	ACZXI .	IYVOA	
₩02 X I	_				
	****	******	*****	******	:

38 0 50

92

45

52

50

ē.

REAL   MASSGA   MASGA   MA	REAL MASSSA MASSRA MASSGO MASSO MASSO COMMON BLOCK CATER COMMON MATRIX COMMON BLOCK COMMON MATRIX COMMON BLOCK COMMON MATRIX COM		COMMON /MASSES	/ MASSOA1	MASSOA2 MASSSO MASSRK(6) MASSDC	SSO , MASSO	•
C MATRIX COMMON BLOCK  C COMMON /MATRIX / DOCAGE(3.3) DCHWA(3.3) COMMON /MATRIX / DOCAGE(3.3) DCHWA(3.3) COMMON /MISC / DAGECT(31) LINECT(31) IPRICNI(31) MAXINE FRADROL HEADYN	COMMON /MAIRIX / DOMRR(3.3) DOMRR(3.3) DOMRR(3.3)    **COMMON /MAIRIX / DOMRR(3.3) DOMRR(3.3)    **COMMON /MISC / IPAGECI(31) DOMRR(3.3)    **COMMON /MISC / MISC / M		REAL +	MASSDA1			
COMMON /MATRIX / DCMAE(3.3) DCMR4(3.3) COMMON /MATRIX / DCMXE(3.3) DCMR5(3.3) CMR6(5.3) CMR6(5.3	COMMON /MATRIX / DCMARE(3.3) DCMARAILME TO DCMARE TO TAKE THE TOTAL TO TAKE THE TOTAL THE	O O	IRIX COMMON BLOCK			***************************************	* * *
DCMSE(3.3)   DCMTS(3.3)   DCMTS(3.3)	DCMSE(3.3)   DCMTS(3.3)   DCMTS(3.3)	,	COMMON /MATRIX	/ DCMAE (3.3)	. DCMRA(3.3) . DC	MSA(3.3)	
HEADER   H	HEADER   H		•	DCMSE(3,3)	DCMTS(3,3)	MTE(3,3)	
Transport	TORGELLANEOUS DATA COMMON BLOCK   TORGECT(31)   LINECT(31)   LINECT(		• •	DCMDUM(3,3)	UAE (3,3).	. (C'C)NCE	
COMMON /MISC	COMMON /MISC		CELLANEDIS DATA C	OMMON BLOCK	*****	****	•
COMMON /MISC / IPAGECT(31) LINECT(31) IPRTCNT(31)  + MAXELNE MAXENT MAXEVNT + MAXELNE MAXENT MAXEVNT + HEADELT HEADLA HADLA HAD	COMMON /MISC / IPAGECT(31)		************	*******	• • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	:
HEADEL   HEADEL   HEADEL   HEADEL	### MAXLINE . MAXENT		COMMON /MISC	/ IPAGECT(31)	, LINECT(31)	, IPRICNI(31)	
TRAUENDE   TENDET	TENER   1   1   1   1   1   1   1   1   1		•	MAXLINE	MAXREPT	MAXEVNT	•
HEADSA	HEADRAL   HANCAL   HEADRAL   HANCAL		<b>.</b>	I E VL I NE	IERRELG	07.	•
HEADROL	HEADROL		•	IDATE	HEADALI	HEADVEL	
HEADER(24)   THEADER(2)   THEADER(3)   TACCEL(3)   TACCEL(3	HEADWG1   HEADWG1   HEADWG1   HEADWG1		•	HEADSR	HEADYAW	. HEAUPII	•
HEDDER(24)   TRENTS(38)   TIMES(38)	HEADER(24)   TEVENTS(38)   TIMES(38)		+	. `	. HEAUWGI	GIAS	•
HEADER(24)   INEQNIN   FRIEND	HEADER(24)   INEQNIN   FRIEND		•	REPIYPE(5,3		PRINGAL (2)	
HANDE	The primary		•	IHEADER(24)	•		•
+ PRTMASS(2) , PRTINDX , PRZVEL  - VECT(3) , XYZ(3) , SAVINE  - XACCEL(3) , YACCEL(3) , SAVING  - REPTYPE , BIAS , PRTINGT  - PRTWGHT , PRTWGHT , PRTNGT  - PRTWGHT , PRTWGHT , PRTNGT  - COMMON / RUITA / TIME , TIMES , DELTAT , TRAJSO(193) , TRAJO(193)	+ PRTMASS(2) , PRTINDX , PRZVEL  -		+	•	IMADC		•
+ XACCEL(3) , YACCEL(3) , SAVTIME	+		•	PRIMASS(2)	PRTINDX	. PKZVEL	•
INTEGER   REPTYPE   BIAS   PRTLNGT	INTEGER   REPTYPE   BIAS   PRTLNGT		+	ZVECT(3)	, XY2(3)	, SAVTIME	
INTEGER   REPTYPE   BIAS   PRILNGT	INTEGER   REPTYPE   BIAS   PRILNGT		•	XACCEL(3)	. YACCEL(3)	, ZACCEL(3)	
+ PRTEMP , PRTMASS , PRTINDX  INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME , TIMES , DELTAT	+ PRTEMP , PRTMASS , PRTINDX  INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME , TIME5 , DELTAT		INTEGER	REPTYPE	. BIAS	. PRILNGT	•
TRAUSA   TIME   TIME   TRAUSA   TRAUS	TRAUSA   TIME   TIME   TRAUSA   TRAUS		+ +	PRIWGHT	-	A CALL TOO	
Integration Routine Common Block   Trade   T	TRAUSH			7X-1737	CAMERIA .	, TRIINDA 444444444444444444444444444444444444	•
COMMON / RKUTTA / TIME , TIMES DELTAT . TRAUSO(193) . TRAUGA (193) . TVCEQS (225) . QUATSO (65) . QUATSO (65) . QUATOA (65	COMMON / RKUTTA / TIME , TIMES DELTAT TRAUSO(193) . TRAUGA (193) . TVCEQS (225) . QUATSO (65) . QUATOA (65)		EGRATION ROUTINE	COMMON BLOCK			* *
TRAUSA(193)   TRAUDA(193)   TRAUCH(97.3)	TRAUSA(193)   TRAUDA(193)   TRAUCH(97.3)		COMMON /DKITTA	/ TIME TIME		TRAJISO(193)	
+ FRAUC(193) TVCEGS(225) QUATSG(65) + GUATSA(65) QUATOA(65) QUATAC(65) + FRAUC(193) TVCEGS(225) QUATAC(65) + FRAUC(193) TPCPASS TREP + FRAUC(193) TPCPASS TREP + FRAUCK TOWN TOWN TOWN TOWN TOWN TOWN TOWN TOWN	+ FRAUC(193) TVCCGS(225) QUATSO(65) + GUATSA(65) TVCCGS(225) QUATSO(65) + GUATSA(65) QUATSA(65) QUATSC(65)   INSTER   IN		+	TDA.ICA( 192)		TDA.ICH(97.3)	
### ### ##############################	### ##################################		. +	104.1AC(193)	TVCEOS(225)	OUATSO(65)	
				OLIATEA(SE)	(	C STATE OF TAIL	
POINTS   P	FOLDER   F		•	COALSA(65)	. 40A10A(65)	, 004140163)	
TOTAL   TOTAL   TOTAL			•	LISIN	. IFCPASS	. IKKPASS	
TYTA   TRYSUMX   TRYSUMX   TYTA   T	HX		•	POINIS	×	. IYPKX	
1   1   1   1   1   1   1   1   1   1	+		+	IKX I	. IKSUMX	. IKPASSX .	
1	1		+	ΙΥΙΧ	. IVI 1X	. 1Y12X	
1	+ IVPRIZX , IPVIX , IPVIX , IREIN   ICVIX , ICVIX , IREIN   ICOROUE OCCUPANT ALGNE COMMON BLOCK   COMMON /TORGOA / TLCHGA(3) , TMCHGA(3) , TNCHGA(3) , TNCHGA(3) , TNCHGA(3) , TNCHGA(3) , TNCHGA(3) , TNCHGA(3) , TNAEDA   + TLAEOA , TMAEOA , TNAEOA , TNAEOA     F(IEVENTS(28) EQ. 0) GOTO 500     F(INTSTP EQ. 0) GOTO 10     F(INTSTP EQ. 0)		+	1413x	. IYPRIX	. IYPRI 1X	
+ ICYIX , ICYIX , IREIN  TORQUE OCCUPANT ALGNE COMMON BLOCK  COMMON / TORGOA / TLCHOA(3) , TMCHOA(3) , TNAEDA  + TLAEDA , TMAEDA , TNAEDA  KEAL IXZP, IVZQ, IZZR, IXXP, IXXP, IXZR, IVVQ, IVZR  IF (IEVEN'S(28) EQ O) GOTO 500  IF (INTSTP EQ O) GOTO 10	+ ICYIX , ICYIX , IREIN  TORQUE OCCUPANT ALONE COMMON BLOCK  COMMON / TORGOA / TLCHOA(3), TMCHOA(3), TNCHOA(3),  ** TLAEOA , TMAEDA , TNAEDA  ** TLAEOA , TMAEDA , TNAEDA  ** FEAL IXZP,IYZO,IZZR,IXXP,IXXP,IXZR,IYYO,IYZR  IF (IEVENTS(2B) EQ O) GOTO 500  IF (INTSTP EQ O) GOTO 10  SAVE PREVIOUS Z-VELOCITY FOR PEAK TRAJECTORY		+	IVPRIZX	IPVIX	. IPYI1X	
CORQUE OCCUPANT ALONE COMMON BLOCK   COMMON   TORGOA   TLCHOA(3)   TNCHOA(3)	COMMON /TORGOA / TLCHOA(3), TMCHOA(3), TNCHOA(3), TNCHOA(3), TNCHOA(3), TNCHOA(3), TNAEDA  **TAECA IXZP, IVZQ, IZZR, IXXP, IXXP, IXXP, IXZR, IVVQ, IVZR IF(IEVEN'S(28) EQ. 0) GDTD 500 IF(INTSTP EQ. 0) GDTD 10  SAVE PREVIOUS Z-VELOCITY FOR PEAK TRAJECTORY		•	ICYIX	ICYLIX	IREIN	
COMMON /TORGOA /  FEAL IXZP, IYZQ, IZ  IF (IEVENTS(28) E  IF (INTSTP EQ. O)	COMMON /TORGOA / COMMON /TORGOA / KEAL IXZP, IVZQ, IZ IF (IEVENTS(28) E IF (INTSTP EQ. O)		*************	********	٠	******	• • •
CDMMDN /TDRQOA / FEAL IXZP.1YZQ.1Z IF(IEVENTS(28) E IF(INTSTP EQ 0)	CDMMON /TDROOA /  KEAL IXZP. IYZQ. IZ IF (IEVENTS(28) E IF (INTSTP EQ. O) SAVE PREVIOUS Z-VELOC	C TOR	OUE OCCUPANT ALON	COMMON BL	¥		•
•	+ + + + + + + + + + + + + + + + + + +	0	• • • • • • • • • • • • • • • • • • • •	*********	************	**************	***
•	**************************************		COMMON /TORGOA			10A(3)	
•	. SA • • • • • • • • • • • • • • • • • •			TLAEDA .	•	PA .	
• ;	SAVE	ပ					
• :	SA VE	د	1 0601 0601	0221 0221 021	0221	26.7	
•	SAVÉ		TEAL INCH. 1720. I	CO CO COTO E	. 1 ATP . 1 AZK . 1 TTQ . 1	17K	
•	SAVE			50. 0) 6010 5	3		
	SAVE		TI (TIME) SILL SECTION				
CAUC DOCUMENT V. VELOCITY FOR DERVIOUS TORING OF A			O TOWN TO TOWN OF THE STATE OF	VITY COD DEAV	TOALIGOTOOV		
		ָ י י	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		200000		•

```
151
        83/11/07, 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C 1LDA = TLAEDA + TLCHDA(3)
C 1MOA = TMAEDA + TMCHDA(3)
C 1MOA = TMAEDA + TMCHDA(4)
C 1MOA + TMAEDA + T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C COMPUTE VELOCITY COMPONENTS IN EFCS
CRACKLANDONENTS 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C COMPUTE FORCES AND MOMENTS ON OCCUPANT ALONE

C COMPUTE FORCES AND MOMENTS OF COMPUTE COMPUTE COMPUTE FORCES AND MOMENTS OF COMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C SUM FORCES

Construction of the contract of 
        FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 + +TRAJOA(12)+TRAJOA(5)-TRAJOA(11)+TRAJOA(6)
TRAJOA(17) = XACCEL(2) = FX/MASSOA2
TRAJOA(18) = YACCEL(2) = FY/MASSOA2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALL ATMOS(TRAJOA(4),OLDALT(2),PRESALT(2))
OLDALT(2) = TRAJJA(4)
CALL AERFMOA
                                                                                                                                                                                                                                                                               .GT. 0.0) G0T0 t0
= 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRAJDA(14) = TRAJDA(6)
TRAJDA(15) = TRAJDA(6)
TRAJDA(16) = TRAJDA(7)
TRAJDA(20) = TRAJDA(11)
TRAJDA(21) = TRAJDA(12)
TRAJDA(22) = TRAJDA(13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FY = FYAEDA + FYCHDA(3)
FZ = FZAEDA + FZCHDA(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FX = FXAEDA + FXCHDA(3)
        0P 7 = 1
                                                                                                                                                                                                                                                                      IF (TRAJDA(4) ...
TRAJDA(1) ...
IEVENTS(30) ...
TIMES(30) ...
        74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALL CHUTES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GD TO 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10 CONTINUE
                SUBROUTINE OCCALON
                                                                                                                                                                                                                                                                                                115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170
```

IRAJUA(19) - ZACCEL(2) - FZ/MASSOA2 - GRAVITY

```
C ANGULAR MOMENTUM EQUATIONS

C ANGULAR MOMENTUM EQUATIONS

C IXZP SIXZDA * TRAJOA(11)

C IXZP SIXZDA * TRAJOA(12)

C IXZP SIXZDA * TRAJOA(12)

C IXYQ SIXYDA * TRAJOA(13)

C TAUX SIXDA * TRAJOA(24)

C TAUX SIXDA * TRAJOA(2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       500 CONTINUE
RETURN
END
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38
                                                                               175
                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  205
```

PAGE

0PT = 1

SUBROUTINE PCHUIFI (VO, DP. CD. POROSIY, TFP.)

TEACHINE   TERRETG	FEVILINE   FERRICA   LU   LU   LU   LU   LU   LU   LU   L	COMMON /MISC / IPAGECT(31)	/ IPAGECT(31)	(31)	LINECT(31)	. IPRICNI(31)
HEADSH   HEADVAL   HEADVEL	HEADOR   HEADOR   HEADOR   HEADOR   HEADOR	• •	I E VL I NE	• •	TERRFLG	
HEADRIA   HEADRIA   HEADRIA   HEADRIA   HEADRIA   HEADRIA   HEADRA   HEADRIA   HEADR	HEADROL   HEADWAY   HEADWAY   HEADWAY	•	IDATE	•	HEADALT	, HEADVEL
FEFFIVE(13)   PRTING(12)   PRTING(13)   PR	FEVENTY   PRILING   PRING	+ +	HEADSR	•	HE ADVAW	. HEADPIT
HEADER(24)   IEVENTS(38)   THESCR(12)   THESCR(12)   THESCR(12)   THESCR(12)   THESCR(12)   THESCR(12)   THESCR(12)   THESCR(13)   TACCEL(13)   TA	HEADER(24)   IEVERTS(38)   THES(28)	• •	REPTYPE	5.31)	PRILNGT(2)	PRIWGHT(2)
HANDC   PRTEMP   PRTEMP   PRTEMP   PRTEMP   PRTEMP   PRTEMP   PRTEMP   SAVITHE   PRTEMP   SAVITHE   PRTEMP	INTEGER	+	IHEADER	24)	IEVENTS(38)	, TIMES(38)
## PRIMASS(2)   PRIMAX   PRIVEL  **CEL(3)   XYZ93   XYZ191  **CEL(3)   XYZ193   XYZ191  **CEL(3)   XYZ193   XYZ191  **CEL(3)   XYZ193   XYZ191  **CEL(3)   XYZ193   X	## PRTMASS(2)   KRZUEL   ## VECT(13)   XYZ(3)   SAVIHE   ## REPTYPE   BILS   SAVIHE   ## REPTYPE   #	•			IMVDC	
- ACCEL(3)	VACCEL(3)   VACCEL(3)   SAVINE	+	PRTMASS (	· •	PRTINDX	, PKZVEL
TATEGER   TATCEL(3)   TATCEL(3)   TATCEL(3)	MINTEGER   REPTYPE   STACEE(13)   CACCEC(13)	*	ZVECT(3)	•	XYZ(3)	. SAVIIME
MILEGER   REPUTIVE   BLAS   PRILIMIX   PRIVATE   PRIVATE   BLAS   PRILIMIX   PRIVATE   PRIVATE   PRIVATE   PRIVATE	## PRIVATE ## PREVINCE ## PRIVATE	*	XACCEL ( 3		YACCEL(3)	ZACCEL(3)
C SECTION 6 COMMON BLOCK C C SECTION 6 COMMON LOCK C C SECTION 6 COMMON LOCK C C SECTION 6 COMMON LOCK C C SECTION 7 SEATON 1 1X250 1	C SECTION 6 COMMON SLOCK  C SECTION 6 COMMON SLOCK  C SECTION 6 COMMON SLOCK  C SECTION 7 COMMON / ISEATOC / IPCNIL XCGSO	INTEGER	PRIWGHT	•	8145	. PRILNG!
C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC / IPCNTL	C SECTION 6 COMMON BLOCK  C COMMON / ISEATOC / IPCNTL	•	PRTEMP	•	PRTMASS	, PRTINDX
- COMMON / ISEATOC / IPCNIT, XCGSO	COMMON / ISEATOC / IPCNIL , XCGSO		OCK			
### ### ### ### ### ### ### ### ### ##	### ### ### ### ### ### ### ### ### ##	•	/ TOCNITI		08908	CVXXI
The color of the	NET	COMMON / 1 SEM 100		1 × 4 0 0	-	-
TXXDA   TXDA   TX	TXXDA   TXXDA   TXXDA   TXXDA   TYXDA	• •		17250		٠.
1200	1220A   1220A   1220A   1220B   1220		TYKOA.	A C X X		
TYSO	TYSO   TYSO   TYSO   TYSO   TYSO   TYSO		12704	4000	•	-
1720a   1770a   1770	C SECTION 14 COMMON BLOCK  C SECTION 14 COMMON BLOCK  C COMMON / PARCHUI / IRECOV TRDPLOY RECOVLL  RECORAG RECOVED RECORS RECOVED RECOVER RECO			4000X		•
12250   1XX0A   1XZ0A   1YY0A   1YY0A   1YZ0A   1YZ0A   1ZZ0A   1ZZ0	12250   1XXOA   1XZOA   1XZOA   1YYOA   1YZOA   1ZZOA   1ZZO	KEAL	IXXSU	IAYSU	•	•
C SECTION 14 COMMON BLOCK  C COMMON / PARCHUT / IRECOV  TROPLOY  TRECOVEL  TROPLOY	C SECTION 14 COMMON BLOCK  C COMMON / PARCHUT / IRECOV	• •	05771	1 2 2 C		•
C SECTION 14 COMMON BLOCK  COMMON / PARCHUI / IRECOV	C SECTION 14 COMMON BLOCK  COMMON / PARCHUT / IRECOV  + KECOVPD  + KECOVPD  - KRECAP  - KRECOVET  - KRECAP  - KRECOVET  - KRECAP  - KRECOVET  - KREC			•	**********	•
COMMON /PARCHUT / IRECOV RECOVED RECOVEL RECOVED RECOVED POROSR XRECAP YRECAP YRECAP TRECAP T	COMMON / PARCHUT / IRECOV   TRDPLOY   RECOVLL    + KECDRAG   RECOVED   POROSR    + NPTSRLS   RECOVLS(2.25)   IFTRECV    + NPTSRLS   RECOVLS(2.25)   IFTRECV    + NPTSRLS   RECOVET(2.25)   IFTRECV    + NPTDFT1   DROGFT   DROGFD    + NPTDFT1   DROGFT   DROGFD    + NPTDFT1   DROGFT   DROGFD    + NPTDFT2   DROGFT   DROGFD    + NPTDFT3   DROGFL   DROGFD    + NPTSDLS   DROGLL   DROVELX    + NPTSDLS   DROGLL   DROVELX    + NPTSDLS   DROGLL   DROVELX    + NPTSDLS   DROGGD   DROVELX    + NPTSDLS   DROGGD   DROVELX    + NPTSDLS   DROGGD   DROVELX    + NPTSDLS   DROGGD   DROVELX    + NPTSDLS   TFP1   TFP1    - NPTSRDT   TFP1   TFP1    - NPTSRDT   RECOVDT(2.25)    - NPTSRDT   RECOVDT(2.2	C SECTION 14 COMMON BL	DCK			
+ KECDRAG KECOVPD  ***XRECAP YRECAP NPTSRLS RECOVF1(2.25) + RE	## RECDRAG RECOVPD  *** XRECAP YRECAP  *** NPTSRLS RECOVF1(2.25)  *** NPTSRLS RECOVF1(2.25)  *** NPTSRLS RECOVF1(2.25)  *** NPTDF12 DROGGES  *** NPTDF12 DROGGLS (2.25)  *** NPTDF11 DROGGLS (2.25)  *** NPTDF11 DROGGLS (2.25)  *** NPTSDLS DROGGAP  *** NPTSDLS DROGGAP  *** NPTSRDT NPTSRDT  *** NPTSRDT NPTSRDT  *** NPTSRDT NPTSRDT  *** NPTSRDT NPTSRDT  *** NPTSRDT NPTSRDT NPTSRDT  *** NPTSRDT NP	COMMON /PARCHUT	/ IRECOV		TROPLOY	. RECOVLL
+ XRECAP YRECAP YRECAP   + NPTSRLS	+ XRECAP XRECAP YRECAP   + NPTSRLS	+			RECOVPD	POROSR
+ NPTSRLS RECOVES(2,25) + POROGUE DRORGUE - POROSDO VELCON - NPTDFT1 DROGETIC(2,25) + POROSDO VELCON - NPTDFT1 DROGETIC(2,25) - NPTSDLS DROGETIC(2,25) - NPTSDT DROG	+ NPTSRLS RECOVES(2,25) + POROGUE POROGUE POROGUE - POROGUE POROGUE POROGOE - POROSD2 VELCON - POROSD2 VELCON - POROSD2 POROGETI(2,25) - POROGETI POROGETI(2,25) - POROGETI POROGETI(2,25) - POROGETI POROGETI (2,25) - POR	-	XRFCAP	•	VEFCAP	ZRECAP
NOT SREAD   NET	NPTSRF1   NECUVF1(2.28)	-		•	•	20101
Note	NP   SWE	•	NP I SKL S	•	N (	, Irikecv
+ POROGUE DRDRAG2 + POROSD2 VELCON + POROSD2 VELCON - POROSD2 VELCON - POROSD2 VELCON - POROGET1(2.25) - POROGET1(2.25) - POROGET1 POROGET1(2.25) - POROGET1	+ POROGUE DEPRAG2  + POROSD2 VELCON NOTDF12 DEPRET2(2,25)  + NPTDF11 DEPRET2(2,25)  + NPTSDLS DEPRET1(2,25)  + DEPRET2 DEPRET2(2,25)  + DEPRET2 DEPRET2(2,25)  + DEPRET2 DEPRET2 DEPRET2  + DEPRET2 DEPRET2 DEPRET2 DEPRET2  + DEPRET2 DEPRE	•	NP I SRF I	•	2	, SEPTHCE
PORGSD2   VELCON   PORGSD2   VELCON   PORGSD2   VELCON   PORGSD2   PORGET1(2.25)   PORGSD1   P	+ PORGSD2 VELCON  - NPTDFT2 DRGGFT2(2.25) ,	•	IDROGUE	•	DRDRAG2	. DROGPD2
+ NPTDFT1	+ NPTDFT1	•	POR0SD2	•	VELCON	, IFTDR02
+ NPTDFT1 DROGFT1(2.25)  + NPTSDLS DROGLS(2.25)  + DROGLD DROGLL + DROGLL -	+ NPTDFT1 DROGET1(2.25)  NPTSDLS DROGLS(2.25)  NPTSDLS DROGLS(2.25)  + DROGPD1 DROGLL  + DROGPD1 DROGSD1  + DROGED1 DROGSD1  + DROGAP ZDROGAP  ZDROGAP  - CHALT2 GLIMIT  - TFP2 FP3  + DROG = .5 * P1 * DP  SP = .25 * P1 * DP	•	NPINETS		DB0GFT2(2 25)	
NTSDLS   N	NTSDLS   N	. •	A TOTON	•	Cac Cit (C) on	•
DROGLS(2,25)   OROGLS(2,25)   OROG	DROGLS(2,25)   OROGLS(2,25)   OROGLS(2,25)   OROGPO	•	101	•	DKUGF I I (Z, Z3)	•
+ + + + + + + + + + + + + + + + + + +	+ DISPLOY DROGLL + DROGDI POROSDI - DROGDI POROSDI - DROGAP DROGAP - CHALT2 GLIMIT - CHALT2 GLIMIT - TFP2 TFP3 - T	•	NPTSDLS	•	DROGLS(2,25)	. TDOPLOY
+ DROGPD1 , POROSD1 + DROVELY DROVELZ + VDROGAP , ZDROGAP + CHALT2 GLIMIT + CHALT2 GLIMIT + CHALT2 , WGHIDC + FP3	+ DROGPD1 , POROSD1 - DROVELY DROVELZ - DROVELY DROGAP - DROVELZ DROGAP - DROVELZ DROGAP - DROGAP - CHALT2 , CDROGAP - TFP2	•	DISPLOY	•	DROGLL	, DRDRAG1
+ DROVELY DROVELZ  + CHALT2 CHALT2 CALIMIT  - CHALT2 GLIMIT  - CHALT2 GLIMIT  - CHALT2 GLIMIT  - FF A CDDC FF A CDDC  - FF A CDDC  - NPTSRDT  - CDC CDCC NPTSRDT  - CD	+ DROVELY DROVELZ  + TOROGAP TOROGAP  - CHALT2 GLIMIT  - CHALT2 GLIMIT  - CHALT2 GLIMIT  - CHALT2 GLIMIT  - CODC WGHTDC  - FFP3  - CODC FFP3  - CODC NPTSRDT  - LE J = K = 1CNT = O  - CODC NPTSRDT  - CODC NPTSRDT  - LE J = K = 1CNT = O  - CODC NPTSRDT  - LE J = N = N = N = N = N = N = N = N = N =	•	DROGPD 1	•	POR0501	DROVELX
+ YDROGAP ZDROGAP CHALT2 CHALT2 CHALT2 CLIMIT AFRADC WGHTDC FFP2 TFP3 CDDC NPTSRDT I = J = K = ICNT = O CDDC NPTSRDT SP = 25 * PI * DP ** 2 VMAX = [PI * DP ** 3] / 12 VMAX = [PI * DP ** 3] / 12 LF (VMAX = EQ 0.0) G010 135	+ YDROGAP ZDROGAP + ZDROGA	•	DROVELY	•	DOUVEL 7	XDBOGAP
+ CHALT2 CHALT2 CLENCES  + AREADC	+ CHALTZ CLEMENT CHALTZ CLEMENT CHALTZ CLEMENT CHALTZ CLEMENT CHALTZ CLEMENT CHALTZ CDDC TFP3 TFP3 TFP3 TFP3 TFP3 TFP3 TFP3 TFP3	. •	VDDOCAD	•	ZDDOCAD	- TOWN .
CHALT2   GLIMIT   CHALT2   GLIMIT   CHALT2   GLIMIT   CHALT2   CHALTC   C	CHALT2   CLAIMIT   CHALT2   GLIMIT   CHALT2   GLIMIT   CHALT2   CHALT2   CHALT2   CHALT2   CHALT2   CHALT2   CHALT2   CHALT3	•	TURUGAR	•	ZURUGAT	. CHALL
### AREADC ####################################	+ MREADC , WGHTDC , TFP3 , TFP4 , TFP5 , TFP	•	CHALT2	•	GLIMIT	. TDELAY
TFP2	+ IFP2 , IFP3 , ODC	•	AREADC	•	WGHTDC	. TFP1
+ CODC , NPTSRDT   1 = J = K = 1CNT = O	+ CODC . NPTSRDT	•	TFP2	•	1693	. TDROGLS
I = J = K = 1CNT = 0 GODG = .5 * PI * DP SP = .25 * PI * OP ** 2 VMAX = [PI * DP ** 3] / 12. If (VMAX = EQ 0.0) GOTG 135	= J = K = ICNT = 0   5 + P1 + DP   5	•	CODC	•	NPTSRDI	PECOVDI (2.2)
I = J = K = ICNI = O GODC = 5 + PI + DP SP = 25 + PI + OP ++ 2 VMAX = (PI + OP ++ 3) / IF (VMAX EQ 0.0) GOTQ	I = J = K = ICNI = O CODC = 5 + PI + DP + 2 VMAX = (PI + DP + + 3) / IF(VMAX = EQ 0.0) GOTO FTP1 = 1 OOO			•		
25 • PI • DP • • 25 • PI • DP • • 2 • PI • DP • • 3 /	= .5 • PI • DP •• 2 = .5 • PI • DP •• 2 = .6 • PI • DP •• 3) / = .1 OOX)	-	1			
= 5 • PI • DP 25 • PI • DP •• 2 = (PI • DP •• 3) / MAX EQ 0.0) G010	= .5 • PI • DP .25 • PI • OP •• 3) / . (PI • OP •• 3) / MAX EQ 0.0) GOTQ = 1 000	" L				
25 • PI • DP •• 2 • (PI • DP •• 3) / MAX EQ 0.0) G010	.25 • PI • OP •• 2 = (PI • DP •• 3) / MAx EQ 0.0) GOTO = 1 000	• S:	do .			
* (PI + DP ++ 3) /	= (PI + DP ++ 3) / WAX EQ 0.0) G010 = 1.000	. 25 • PI	0P •• 2			
MAX EQ 0.01 G010	AAX EQ 0.03 G010 = 1 000	Id) *	/ (8 ::	_:		
200 1000	1 000	9	GOTO CO			
		, COO				

```
+ .AND. ((VMAX - VOL!) / VMAX) .GT. 0.0) GD TO 70

J = J + 1

GD TO 75

J = J + 1

VOL! = VOL

IF ((VMAX - VOL) / VMAX) 50,200,60
                                                                                                                                                                                                                                                                                                                                                                                                                                                  95 IF ((VMAX - VDL) / VMAX) 100,200,105
C DECREASE TFP
100 FTP1 = FTP3 - .5 • ABS(FTP3 - FTP2)
GD TD 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       115 IF ((VMAX - VOL) / VMAX) 120,200,125
                                                                                                                                                                                                                                                                                                                                                                          C INCREASE 1FP
85 FTP3 = FTP2 + .5 * ABS(FTP2 - FTP1)
90 TFP = FTP3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C INCREASE TFP
105 FTP1 = FTP3 + .5 * ABS(FTP3 - FTP2)
110 TFP = FTP1
G0 T0 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C DECREASE TFP

120 FTP2 * FTP1 - .5 * ABS(FTP1 - FTP3)

GD TO 130

C INCREASE TFP

130 TFP = FTP1 + .5 * ABS(FTP1 - FTP3)

130 TFP = FTP2
                                                                                                                                                                                                                                                                                                                               C DECREASE TFP
80 FTP3 = FTP2 - 5 + ABS(FTP2 - FTP1)
                                                                                                                                                                                                                                                                                                                  IF ((VMAX - VOL) / VMAX) 80,200,85
                                                                                                                                                                                                                                                        75 ICNT # ICNT + 1
IF (MDD(ICNT,3) .EQ. 0) GD TO 115
IF (MDD(ICNT,2) .EQ. 0) GO TO 95
                                                                                     C DECREASE TFP
50 FTP2 = FTP1 - .5 • FTP1
G0 T0 65
C INCREASE TFP
60 FTP2 = FTP1 + .5 • FTP1
65 FTP = FTP2
70 FTP2 = FTP2 + .5 • FTP1
G0 T0 15
G0 T0 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WRITE(5, 175)
GDTO 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WRITE(5,170)
G010 199
                                                                                                                                                                                                                                                                                                                                                              GO 10 90
                                                                                                                                                                                                                                                                                                                                                                                                                        GD TO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          G010 15
                                                45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            165
                                                                                                                                                                                                                                                                                                                                                                                                                                       ပ
                                                                                                                                                                                                                                                                                                     Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                        90
                                              175
                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         220
                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 225
                                                                                                                                                                                                                                                                                                                                                195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202
```

SUB	ROUTINE	SUBROUTINE PCHUTET	74/74 OPT=1	0	-				Z	FTN 4 6+428	83/11/	ò (ò	83/11/07 09:41:53	PAGE 157	15	
230		170 FORMA	17(2X.//	72( 1) ATED	4.)/,4X, TO BE E(	"FATAL QUAL TO	ERROR TO ZERO	(SUBROU RESULT	ITINE PC	HUTFT) *** "	··					
		175 FORMA +*A CA	17(2X, // 17(2X, // 11CULATE	72( IF D TO	4+)/,4X, BE EQUAL	"FATAL L TO 2E	ERROR	(SUBROUSULTS I	N DIVIS	+/,'Z(1H*)) 175 FORMAT(2x,//72(1H*)/,4x,"FATAL ERROR(SUBROUTINE PCHUTFT)*** ",/, +*A CALMATED TO BE EQUAL TO ZERO RESULTS IN DIVISION BY ZERO", +,73(1H*))	··					
235		180 FORMA	17(2X // R2+P3/A	72( 14 ) CAL	4+)/,4X,	"FATAL EQUAL	ERROR TO 0	(SUBROURE SULTS	TINE PC	HUTET) *** "	·;					
		+/ ,72( 185 FORMA +"AREA	14.)) 17(2X,// CALCUL	72(1F ATED	1+)/.4X. TO BE EC	"FATAL Qual to	ERROR To Zero	(SUBROURESULT	ITINE PC	HUTFT) *** "	· .					
240		+/.72( 190 PRINT 195 FORMA	( 1H+ ) ) 7 195 17 (5X, 364	¥dH	VOL HAS	GONE 1	THRU 5	00 11ER	AT TONS)							
		199 CONTI	INUE						•							
245		200 CONTI	INUE													
		CAT														

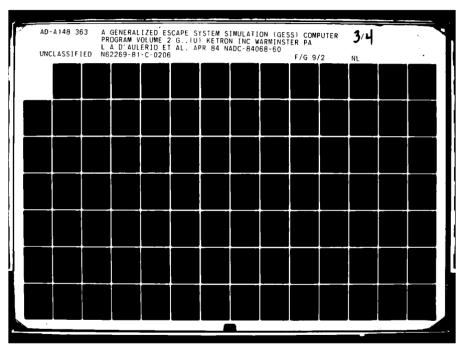
PAGE

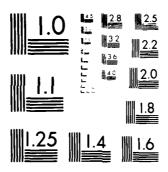
UP 1 = 1

74/74

SUBROUTINE PLOTBIN

```
PAGE
83/11/07, 09.41 53
                                                                                                                                                                     C TOF PLOTTING FILE COMMON BLOCK
                                                                                                                                                                                                                                                                                                    C PLOT FILE VARIABLES COMMON BLOCK
C PLOT FILE VARIABLES COMMON BLOCK
COMMON /PLDT / XACC(3) , YACC(3) , ZACC(3) , ACCR(3) ,
                                                                                                                                                                                                                                      . IDUMMY(40)
, TDELTA
                                     TRAJCH(97.3)
                                                                                                                                                                                                                                                              NHEADER (2)
                                                                                                                                                                                                        . TEXT2(6)
. WORDLEN
                                                 QUATSO(65)
                                                                                                                                                                                                                                                                                                                                                                                              RLVLR(3)
RLPSR(3)
                                                                                                                                                                                                                                                                                                                                                                                  RI ACR (3)
FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                          , ACCR(3)
                                                                                                                                                                                                                                                                                                                                                                     RP05(3)
                                                                                                    IKPASSX
IV12X
IVPR11X
                                                                            IRKPASS
                                                                                                                                           IPYIIX
                                                                                         IYPRX
                                                                                                                                                                                                                                                                                                                                                                                 RZACC(3)
RZVEL(3)
RZPOS(3)
RRVEL(2)
RRPOS(2)
                                                                                                                                                                                                                                                                                                                                         XACC(3) , YACC(3) , ZACC(3)
PVL(3) , QVL(3) , RVL(3)
                                                                                                                                                                                                                                                                                                                                                                     FYAW(3)
                                    , TRAJOA(193)
. TVCEQS(225)
                                                                                                                                                                                                                                      NSENSOR(2)
                                                              QUA10A(65)
                                                                                                                                                                                                                                                              PLTIME(2)
                                                                                                                                                                                                            COMMON /TITLES / SENSNAM(40,6), TEXTI(6)
TEXT3(3), BAUD
                                                                                                                                                                                                                                                                                        WORDLEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IF (INISIP EQ 0) GO TO 9000
IF (TIMES EQ. 0.0) GO TO 9000
IF (TIME-PLTIME(1)) LT 0.05) GO TO 9000
                                                                            IPCPASS
                                                                                                                                                                                                                                                   TIMINI
                                                                                                                               IYPRIX
IPYIX
                                                                                                                                                                                                                                                                                                                                                           PVL(3) 0VL(3) RY
FROLL(3) FPITCH(3), FY
RXACC(3) RYACC(3) RY
RXPDS(3) RYPDS(3) RZ
RPVEL(2) ROVEL(2) RF
RPPOS(2) RQPOS(2) R
                                                                                                      I K SUMX
                                                                                                                                                                                                                                                                            TEXT2
                                                                                                                                                        1CY11X
                                                                                                                   1Y11X
                                      TRAJSA(193)
TRAJAC(193)
                                                                                                                                                                                                                                    NCHANFR(2)
RECORD(35)
                                                              QUATSA(65)
INTSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0006 01 05 (0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SENSNAM(2,1)+10H V ACCELE
SENSNAM(2,2)+10HRAFION
SENSNAM(2,3)+10H(50/0A)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SENSNAM(3, t)=1044-2 - ACCELE
SENSNAM(3, 2)=1044PATION
                                                                                                                               1 Y 1 3 X
1 Y P R 1 2 X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEWSNAM( 1, 1) - 10H X - ACCELE
                                                                                         IPOINTS
                                                                                                                                                                                                                                                               TPOINT
                                                                                                                                                          ICYIX
                                                                                                                                                                                                                                                                            IEXT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1F (NHEADER( 1), EQ. 1)GOTO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SENSNAM( 1, 3.) = 10H( SU/NA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SENSNAM(3-3)-10H(S0/0A)
                                                                                                                    IYIX
                                                                                                                                                                                                                                                                                        BAUD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TEXT(()=IHEADER(1)
TEXT2(1)=IHEADER(1+8)
IF(1.GT.3)GOTO 26
TEXT3(1)=IHEADER(1+16)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SENSHAME 1, 21 - TOHRATTON
0PT=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCHANFR(1) # 18
NSENSOR(1) # 17
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          00 25 1=1,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF (IPLOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CON INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25 CONTINUE
                                                                                                                                                                                                                                                                            INTEGER
 SUBROUTINE PLOTBIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                  9
                                                                                                                                 65
                                                                                                                                                                                                70
                                                                                                                                                                                                                                                                75
                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                               90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -10
```





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1964 A

PAGE

SENSNAM(4,1)=10H10TAL ACCE SENSNAM(4,2)=10HLERATION SENSNAM(4,3)=10H(SO/DA) SENSNAM(5,1)=10H+SO/DA) SENSNAM(5,1)=10H+Y (SO/DA SENSNAM(5,3)=10HY SENSNAM(6,1)=10HY (SO/DA SENSNAM(6,1)=10H+Y - VELOCI	(7.2) (7.3) (8.0)	3) = 10H0A) 1) = 10H-X- POSITI 2) = 10H0N (SQ/OA 3) = 10H) 1) = 10H-Y- POSIT	10,2)=10H0N 10,3)=10H) 11,1)=10H-Z- 11,2)=10H0N 11,3)=10H)	M(12,1)=1 M(12,2)=1 M(12,3)=1 M(13,1)=1 M(13,2)=1	N(13,3)=10H N(14,1)=10H/AW RAT N(14,2)=10H(SQ/GA) N(14,3)=10H N(15,1)=10HROLL AN	ENSMAM(15,2)*10H (50/0A) ENSMAM(16,3)*10H ENSMAM(16,1)*10HPICH AN ENSMAM(16,2)*10HE (50/0 ENSMAM(16,3)*10H	SENSNAM(17,1)*10H7AW ANGLE SENSNAM(17,3)*10H (50/0A) SENSNAM(17,3)*10H C IF(ISEATTR .EQ. 0) GO TO 30	C NCHANFR(1) = 35  NSENSOR(1) = 34  SENSNAM(18,1)=10H-X- ACCELE SENSNAM(18,2)=10H-X-10N	ENSNAM(19, 1) = 1041-7- ENSNAM(19, 1) = 1041-7- ENSNAM(19, 3) = 104RATI ENSNAM(20, 1) = 1041-2-	SENSNAM(20.3) * IOHKALIUN SENSNAM(20.3) * IOHKOD/SA) GENSNAM(21.1) * IOHTOTAL ACCE
110	125	130	135	140	24 25	150	155	160	165	110

PAGE

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RECORD(19)=XACC(3)
RECORD(20)=YACC(3)
RECORD(21)=ZACC(3)
RECORD(21)=ZACC(3)
RECORD(22)=SGRI(XACC(3)+XACC(3)+YACC(3)+YACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XACC(3)+XA
                                                                                                                    RECORD(9)=SQRT(TRAJOA(14)+TRAJOA(15)+TRAJOA(15)+
+ TRAJOA(16)+TRAJOA(16)

RECORD(10)=TRAJOA(2)

RECORD(11)=TRAJOA(3)

RECORD(11)=TRAJOA(4)

RECORD(13)=PVL(2)

RECORD(14)=QVL(2)

RECORD(15)=RVL(2)

RECORD(16)=FROLL(2)

RECORD(16)=FROLL(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONTINUE
WRITE(42) (RECORD(I), I=1, NCHAN)
CONTINUE
ET URN
END
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF(1SEATTR .EQ. 0) GO TO 150
    0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RECORD(18)*FYAW(2)
    74/74
        SUBROUTINE PLOTBIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ပ
                                                                                                                                                                                                                                                                                                                                           380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  305
```

PAGE 164

SUBROUTINE PLOTWAC

11.E 0 10.ATA 11.E 0 11.E 0.E 11.E 0.E 0.E 11.E 0.E 0.E 0.E 0.E 0.E 0.E 0.E 0.E 0.E 0	F INFORMATION WRT AIRCRAFT TO PLOTTING FILE EVERY . O5 WITH DRAS PLOTTING PROGRAM DDEG , DEGRAD , P. ESTOP , IRESTRT, IUNITS P , IPLOT , IDRIFLG, E2, IPHASE3 S2, OTPHAS3 PRIFRO, P. I. P. I.
C COMMUNICATION - CREATE PLOTTING FILE OF C COMMUNICATIONS - C CALLED BY: C CALLED BY: C COMMUNICATIONS - C CALLED BY: C CONSTANTS COMMON BEES DEFINED - C CONSTANTS COMMON BEOCK C CONSTANTS COMMON BEOCK C CONSTANTS COMMON BEOCK C C SECTION 1 COMMON BEOCK C SECTION 1 COMMON BEOCK C SECTION 2 COMMON BEOCK C SECTION 3 COMMON BEOCK C SECTION 4 COMMON BEOCK C SECTION 5 COMMON BEOCK C SECTION 6 COMMON BEOCK C SECTION 7 COMMON SINCH SECTION 7	D PLOTTING FILE EVERY O PLOTTING FILE EVERY ITH DRAS PLOTTING PROGI EG , DEGRAD , PI ESTOP , IRESTRT, IUN IPLOT , IDRIFLG. IPHASE3 , DTPHAS3
C COMMUNICATIONS - C CALLED BY: C CALLED BY: C CALLED BY: C CALLED BY: C MON-COMMON VARIABLES DEFINED - NONE C POTENTIAL ERROR CONDITIONS - C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECT	D PLOTTING FILE EVERY ITH DRAS PLOTTING PROGI EG , DEGRAD , Pi ESTOP , IRESTRT, IUN IPHASE3 DTHAS3 PRTFRO, PI 2, PI 3
C COMMUNICATIONS - C CALLED BY: C CALLED BY: C NON-CDIMON VARIBLES DEFINED - NONE C POTENTIAL ERROR CONDITIONS - C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTIO	EG , DEGRAD , PI   ESTOP , IRESTRT, IUN   IPLUT , IDRIFLG   DTPHAS3   DTPHAS
C CALLED BY:  C NON-COMMON VARIABLES DEFINED -  NONE C POTENTIAL ERROR CONDITIONS -  C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 5 COMMON BLOCK C SECTION 7	ESTOP , IRESTRT, IUN IPLOT , INPIRES , DIPHASE3 , DIPHASS
C DOMENON VARIABLES DEFINED - C NON-COMMON VARIABLES DEFINED - C NON-COMMON CONDITIONS - C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 5 COMMON BLOCK C SECTION 7 COMMON BLOCK C SECTI	ESTOP , IRESTRT, IUP. IPLOT , IDRIFLG. IPHASE3 , OTPHAS3 , OTPHAS4
C POTENTIAL ERROR CONDITIONS - C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 C	EG , DEGRAD , PI IPLOT , IDRIFLG. , IPHASE3 , OTPHAS3 , OTPHAS4 , OTPHAS4 , OTPHAS5 ,
C PDTENTIAL ERROR CONDITIONS - C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 1 COM	ESTOP INESTRI, IUN IPLOT IDRIFLG.
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 6 COMMON BLOCK C SECTION 7 COMMON FREPORT / IREPTS(31) INTEGER PRIFEQ.P11.P12.	ESTOP INESTRI IN IPLOT I DARIFLG.
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 4 COMMON BLOCK C SECTION 6 COMMON BLOCK C SECTION 7 COMMON FREPORT / IREPTS(31)	EG , DEGRAD , PI . IPLOT , IDRIFLG. , IPHASE3 , OTPHAS3 , OTPHAS4 , OTPHAS4 , OTPHAS5 , OTPHAS4 , OTPHAS5
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 4 TO SECTION BLOCK C SECTION 4 TO SECTION BLOCK C SECTION 5 TO SECTION BLOCK C SECTION 6 TO SECTION BLOCK C SECTION BL	EG . DEGRAD . PI ESTOP . IRESTRT, IUN IPLOT . IDRIFLG IPHASE3 . OTPHAS3
C CONSTANTS COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 3 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BL	EG , DEGRAD , PI ESTOP , IRESTRT, IUN IPHASE3 , DTPHAS3 PRIFRO, PI3
COMMON / ICONTRI / DRAVITY , RAD C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK TSTATE , TSTOP TSTOP TSTOP TSTATE , TSTOP T	ESTOP , IRESTRT, IUN I IPHASE3 , DIPHASS
COMMON / CONSTINT / GRAVITY , RAD C SECTION 1 COMMON BLOCK C	EG . DEGRAD , P. ESTOP . IRESTRT, IUN . IPLOT . IDRIFLG IPHASE3
C SECTION 1 COMMON BLOCK  C SECTION 1 CONTRL / TSTART , TSTOP  TSEATTR, ISOSEP  INTEGER ESTOP  C SECTION 3 COMMON BLOCK  C SECTION 2 COMMON BLOCK  C SECTION 3 COMMON BLOCK  C SECTION 4 COMMON BLOCK  C SECTION 7 COMMON FREPTS (31)  INTEGER PRIFACIALITY  C SECTION 1 COMMON FREPTS (31)  INTEGER PRIFACIALITY  C SECTION 1 COMMON FREPTS (31)	ESTOP IRESTRY IUN IPLOT IDRIFLG. IPHASE3 OTPHAS3
COMMON / ICONTRL / TSTART , TSTOP   ISEATTR, ISOSEP   IPHASE1, IPH	ESTOP IRESTRY IUN IPLOT I IDRIFLG. IPHASE3 OTPHAS3
COMMON / ICONTRL / TSTART , TSTOP   ISEATTR, ISOSEP   IPHASE1, IPHASE   IPHASE1, IPHASE   IPHASE1, IPHASE   IPHASE1, IPHASE   INTEGER	ESTOP INESTRT, IUN IPLOT IDRIFLG. IPHASE3 OTPHAS3 FERRO, PII, PI2, PI3
Common Journal, 1502P  HASE  INTEGER  CONTROL 3 COMMON BLOCK  CONTROL 1 DPHASI  COMMON /IDELTAT / DTPHASI, DTPHASI  COMMON /IREPORT / IREPTS(31)  INTEGER  PRIFRQ,P11,P12,	IPHASE3  DTPHASS  DTPHASS  THE STATE OF THE
Therefore in the series of the	DTHASE3 DTPHAS3
C SECTION 3 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 1 COMMON BLOCK C SECTION 1 COMMON 1 REPORT 1 REPTS(31) INTEGER PRIFACIONINA PROPERTY 1 REPTS(31) INTEGER PRIFACIONINA PROPERTY 1 REPTS(31) INTEGER PRIFACIONINA PRIFACIONINA PROPERTY 1 REPTS(31) INTEGER PRIFACIONINA	DTPHAS3
C SECTION 3 COMMON BLOCK C.S.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C.C	, DTPHAS3
C SECTION 3 COMMON BLOCK C***********************************	. DTPHAS3
COMMON /IDELTAT / DTPHAS1, DTPHAS COMMON Z COMMON BLOCK COMMON /IREPORT / IREPTS(31) INTEGER  COMMON /IREPORT / IREPTS(31)	. DTPHAS3 +
COMMON /IDELTAT / DTPHAS1, DTPHAS C SECTION 2 COMMON BLOCK C	, DTPHAS3
C SECTION 2 COMMON BLOCK C. COMMON / IREPORT / IREPTS(31) INTEGER PRIFRQ, PI1, PI2,	PRTFRO, PI1, P12, P13
C.SECILON Z COMMON BLOCK C	PRIFRO, PI1, P12, P13
COMMON / IREPORT / IREPTS(31) INTEGER PRIFRQ,P11,P12, Commonwealth	PRIFRO, PI1, P12, P13
INTEGER PRICE PRICE POLICE POL	71.171.1.174.1.1
O*************************************	2
	******************
C MISCELLANEDUS DATA COMMON BLDCK	
COMMON /MISC / IPAGECI(31)	LINECI(31) . IPRICNI(
•	•
•	•
 ~	• •
٠.	•
+ REPTYPE(5,31),	PRILNGT(2) , PRIWGHT(2)
	IEVENTS(38) , TIMES(38)
*	IMVDC , PRTEMP(
2)	
	XYZ(3) SAVTIME
(E	VACCEL(3) . ZACCEL(3)
INTEGER REPTYPE . (	BIAS . PRTLNGT
+ PRTEMP ,	PRTMASS . PRTINDX
Control by the Control Common of Sections and the Control of the C	
C INTEGRALIUM KOULINE COMMON BLOCK	

```
165
 PAGE
 83/11/07. 09.41.53
                                                                                                                                                             C TOF PLOTTING FILE COMMON BLOCK

C TOF PLOTTING FILE COMMON BLOCK
                                  TRAJCH(97,3)
QUATSO(65)
QUATAC(65)
IRKPASS
                                                                                                                                                                                                                                      TDELTA
NHEADER(2)
Text3
                                                                                                                                                                                                                          IDUMMY (40)
                                                                                                                                                                                                                                                                                                                                                               RLACR(3)
RLVLR(3)
RLPSR(3)
 FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                        VELR(3)
RPOS(3)
                                                                                                                        IYPRI1X
                                                                                                                                      PYI 1X
                                                                                                                                                                                                                                                                                                                                        RVL(3)
FYAW(3)
RZACC(3)
RZVEL(3)
RZPOS(3)
RRVEL(2)
                                                                                                                                                                                                                                                                                                                        COMMON /PLOT / XACC(3) , YACC(3) , ZACC(3)

+ PLL(3) , QVL(3) , RVL(3)

+ RACC(3) , RYACC(3) , RZACC(3)

+ RXPOL(3) , RYPOS(3) , RZACC(3)

RXPOL(3) , RYPOS(3) , RZACC(3)

RYPOS(3) , RYPOS(3) , RRPOS(3)

+ RPPOS(2) , RQPGS(2)
                                                                                                                                                                                                                                                                                       TRAJDA(193)
TVCEOS(225)
QUATDA(65)
IPCPASS
                                                                                                                                                                                                                         NSENSOR(2)
TIMINT
PLTIME(2)
TEXT2
WORDLEN
                                                                                                                                                                                                COMMON /TITLES / SENSNAM(40,6), TEXTI(6)
TEXT3(3), BAUD
                                                                                                                                                                                                                                                                                                                                                                                                                                         IF(IPLOT .LT. 2) GO TO 9000
IF(INTSTP .EQ. 0) GO TO 9000
IF(TIMES .LE. 0.0) GO TO 20
IF((TIME-PLTIME(2)) .LT. 0.05) GO TO 9000
                                                                                              IKSUMX
                                                                                                            IVI 1X
IVPRIX
                                                                                                                                      IPVIX
                                   TRAUSA(193)
TRAUAC(193)
QUATSA(65)
INTSTP
IPDINTS
IKX
IYIX
IYIX
IYIX
IYIX
                                                                                                                                                                                                           TEXT3(3)
NCHANFR(2)
RECORD(35)
TPOINT
TEXT1
BAUD
                                                                                                                                                                                                                                                                                                   C PLOT FILE VARIABLES COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCHANFR(2) = 12

NSENSOR(2) = 11

SENSNAM(1,4)=10H.X- ACCEL

SENSNAM(1,5)=10H(SO/OA) WR

SENSNAM(2,6)=10HT AC

SENSNAM(2,5)=10HT AC

SENSNAM(2,5)=10HT SO/OA) WR

SENSNAM(3,4)=10HT SO/OA) WR

SENSNAM(3,4)=10HT AC

SENSNAM(3,4)=10HT AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IF (NHEADER(2). EQ. 1)GOTO 50
                                                                                                                                                   ICVIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TEXT(1) *!HEADER(1)
TEXT2(1) *!HEADER(1+B)
IF(1.GT.3)GOTO 26
TEXT3(1) *!HEADER(1+16)
 0PT=1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              00 25 1=1,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CONTINUE
                                                                                                                                                                                                                                                              INTEGER
SUBROUTINE PLOTWAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52
                                                              9
                                                                                                                          65
                                                                                                                                                                                     2
                                                                                                                                                                                                                                                   75
                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                             85
                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
```

M(4,4)=10HT0TAL A M(4,5)=10HL (50/0 M(4,6)=10HWRT AC M(5,4)=10H-X- VEL	.5)*10HTY (50/0) .6)*10H) WRT AC .4)*10H·Y* VELOC .5)*10HTY (50/0) .6)*10H	((7,4)=10H-Z-VELO ((7,5)=10HTY (SD/ ((7,6)=10H) WRT AC ((8,4)=10HT0TAL VE ((8,5)=10HCTTY (S	M(8,6)=10H0A) WRT A M(9,4)=10H-X-POSIT M(9,5)=10H0N (50/0 M(9,6)=10H) WRT AC M(10,4)=10H-Y-POSI	SENSMAM (0,5)=10HON (SG/DA SENSMAM (10,6)=10H) WR AC SENSMAM (11,4)=10H-Z-POSITI SENSMAM (11,5)=10HON (SG/DA SENSMAM (11,5)=10H) WRT AC	ATTR .EQ. 0) GG R(2) = 29 R(2) = 28	M( 12, 4) = 10H-X M( 12, 5) = 10H(S M( 12, 6) = 10HT M( 13, 4) = 10H-Y M( 13, 5) = 10H(S	(13,6)*10HT AC (14,4)*10H-Z- ACCE (14,5)*10H(S0/SA) (14,6)*10HT AC (15,4)*10HT0TAL AC	ENSMAM(15,5)=10HL (SD/SA ENSMAM(15,6)=10HWR1 AC ENSMAM(16,4)=10H-X-VELO ENSMAM(16,5)=10H1Y (SD/ ENSMAM(16,6)=10H1Y (SD/	(17.4) = 10H-7 (17.5) = 10HTY (18.4) = 10H-2 (18.5) = 10HTY	ENSNAM(18.6)=10H) WF ENSNAM(19.4)=10HTDTA ENSNAM(19.5)=10HCITY ENSNAM(19.6)=10H-SA ENSNAM(20.4)=10H-X	SENSNAM(20,5)=10HON (SO/SA SENSNAM(20,6)=10H) WRT AC SENSNAM(21,4)=10H-Y- POSITI
<b>5</b>	120	125	130	135	140	24 20	150	153	160	165	170

```
WRITE(41)TEXT1,TEXT2,TEXT3,BAUD.WORDLEN.NCHANFR(2),NSENSOR(2), + IDUMMY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RECORD(1)=TIME
RECORD(2)=RXACC(1)
RECORD(3)=RYACC(1)
RECORD(4)=RRACC(1)
RECORD(5)=SQRI(RXACC(1)+RXACC(1)+RYACC(1)+RYACC(1)+RYACC(1)+RYACC(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WRITE(41)((SENSNAM(I.J),J=4,8),I=1,20)
WRITE(41)((SENSNAM(I.J),J=4,6),I=21,40)
WRITE(41)TIMINT,TDELTA.TPOINT
SENSNAM(21, 5) = 10HDN (SO/SA
SENSNAM(22, 4) = 10H-D WRT AC
SENSNAM(22, 6) = 10H-DN (SO/SA
SENSNAM(22, 6) = 10H-DN (SO/SA
SENSNAM(23, 4) = 10H-DN (SO/SA)
SENSNAM(23, 4) = 10H-DN LL RATE
SENSNAM(23, 4) = 10H-D ITCH RATE
SENSNAM(24, 4) = 10H-D ITCH RATE
SENSNAM(24, 5) = 10H (SO/SA)
SENSNAM(24, 5) = 10H (SO/SA)
SENSNAM(25, 5) = 10H(SO/SA)
SENSNAM(25, 6) = 10H-MRT AC
SENSNAM(26, 4) = 10H-MRT AC
SENSNAM(26, 4) = 10H-MRT AC
SENSNAM(26, 6) = 10H-MRT AC
SENSNAM(27, 4) = 10H-PTTCH ANGL
SENSNAM(27, 4) = 10H-PTTCH ANGL
SENSNAM(27, 5) = 10H-RT AC
SENSNAM(27, 5) = 10H-RT AC
SENSNAM(28, 6) = 10H-MRT AC
SENSNAM(28, 6) = 10H-MRT AC
SENSNAM(28, 6) = 10H-MRT AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IF ( IEVENTS ( 28 ). NE. O) GDTO 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCHAN = NCHANFR(2)
NHEADER(2) = 1
BAUD=10HTIMEFORMAT
WORDLEN=0
TIMINT=TIME
TDELTA=DTPHAS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLTIME(2) = TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     215
                                                                       175
                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                185
                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              205
```

RECORD(8)=RZVEL(1)
RECORD(9)=SQRT(RXVEL(1)\*RXVEL(1) + RYVEL(1)\*RYVEL(1) + RZVEL(1)\*RZVEL(1))
RECORD(10)=RXPGS(1)

RECORD(6)=RXVEL(1) RECORD(7)=RYVEL(1)

220

```
SUBROUTINE PLOTWAC
```

```
RECORD(1)=TIME

RECORD(3)=RYACC(2)

RECORD(5)=RYACC(2)

RECORD(5)=SRACC(2)

RECORD(5)=SRACC(2)

RECORD(5)=SRAVEL(2)

RECORD(7)=RYVEL(2)

RECORD(7)=RYVEL(2)

RECORD(7)=RYVEL(2)

RECORD(1)=RYVEL(2)

RECORD(1)=RYVEL(2)

RECORD(1)=RYVEL(2)

RECORD(10)=RXPOS(2)

RECORD(10)=RXPOS(2)

RECORD(11)=RYPOS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RECORD(13)=RXACC(3)
RECORD(14)=RYACC(3)
RECORD(15)=RZACC(3)
RECORD(15)=RZACC(3)
RECORD(10)=RZACC(3)
RECORD(17)=RXACC(3)
RECORD(17)=RXEL(3)
RECORD(19)=RXVEL(3)
RECORD(19)=RXVEL(3)
RECORD(19)=RXVEL(3)
RECORD(19)=RXPOS(3)
RECORD(20)=RYPOS(3)
RECORD(21)=RXPOS(3)
RECORD(23)=RYPOS(3)
RECORD(24)=RYPUEL(2)
RECORD(25)=RYPOS(3)
RECORD(25)=RYPOS(2)
RECORD(25)=RYPOS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10 150
           150
IF (ISEATTR .EO. 0) GOT RECORD(13) RECORD(14) RECORD(2) RECORD(15) RECORD(5) RECORD(5) RECORD(5) RECORD(17) RECORD(19) RECORD(19) RECORD(19) RECORD(19) RECORD(10) RECORD(20) RECORD(10) RECORD(23) RECORD(11) RECORD(23) RECORD(11) RECORD(25) REPOS(11) RECORD(25) REPOS(11) RECORD(25) REPOS(11) RECORD(25) REPOS(11) RECORD(29) REPOS(11) RECORD(29) REPOS(11) RECORD(29) REPOS(11) RECORD(29) REPORD(11) REPORD(11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF ( ISEATTR . EQ. O) GO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ပ
                                                     230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         250
                                                                                                                                                                                                                                                         235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       285
```

```
169
PAGE
83/11/07. 09.41.53
FIN 4.6+428
                                           WRITE(41) (RECORD(I),1=1,NCHAN)
9000 CONTINUE
RETURN
END
74/74 OPT=1
                        RECORD(29)-RRPOS(2)
                                         150 CONTINUE
 SUBROUTINE PLOTWAC
                                                           280
```

	QUATERNIONS USED TO UPDATE  I, DERIVATIVES OF QUATERNIONS  IEECS TO SCS) AND DOMAE  IEE. FOLLOWING RAIL	OF CHOOSING TO		IRESTRI, IUNITS,		IPRTCNT(31) MAXEVNT LU HEADVEL HEADPIT	61AS PRTWGHT(2) TIMES(38) PRTEMP(2) PXZVEL SAVTIME	. ZACCEL(3) , PRTLNGT , PRTINDX	• 6 .~	GUATAC(65) IRKPASS IYPRX '*PASSX '*PAS
	DE QUATERNIONS ( ES 10N, DERIVATIVE: CMSE(EFCS TO SC!	HAS THE OPTION (	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1510P . ESTOP . 10 1505EP . 1PLOT . 10 1PHASE2, 1PHASE3		, LINECT(31) , MAXREPT , IERRFLG , HEADALT	HEADWGT PRTLNGT(2) IEVENTS(38) IMVGC PRTINDX	YACCEL(3) BIAS PRTMASS		OUATOA(65) IPCPASS IYX IXXUMX IVIX IVIIX IVIIX IPVIX ICVIIX
	ES DERIVATIVE GRMATION MATR TO RAIL SEPAR O UPDATE BOTH TO ACS), ARE	SEPARATION, THE USER HAS THE OPTION OF CHOOSING TO UPDATE ONLY DCMSE.	SS DEFINED: NONE WOLTIONS: NONE	151481 1510P 15EATTR, 1503EP 1PHASE1, 1PHASE2	COMMON BLOCK	/ IPAGECT(31) MAXLINE IEVLINE IDATE HEADSR	HEADROL REPTYPE(5,31) IHEADER(24) PRTMASS(2) ZVECT(3)	XACCEL(3) REPTYPE PRIWGHT PRIEMP	COMMON BLOCK / TIME , TIMES / TRAJSA(193)	QUATSA(65) INTSTP IPQINTS IKX IVIX IVIX IVIX IVIX IVIX IVIX IVIX
SUBROUTINE QUAT	C DESCRIPTION - LEVEL C FUNCTION - COMPUT C FUNCTION - COMPUT C METHOD - PRIOR C METHOD - CEFCS	C COMMUNICATIONS - C CALLED BY:	C NON-COMMON VARIABLES DEFINED: NONE C POTENTIAL ERROR CONDITIONS: NONE CONTENTIAL ERROR CONDITIONS CONTENTIAL ERR	CDMMD	C MISCELLANEDUS DATA CDMMON BLOCK	CDMMON /MISC + + + + + + + + + + + + + + + + + + +	* * * * * *	INTEGER	INTEGRATION COMMON /	* * * * * * * *
-	ដា	õ	<b>ਦ</b> (	S 50		30	36	04	45	50 55

vi	SUBROUTINE QUAT	OUAT	74/74 OPT=1	FTN 4 6+428	83/11/07	09 41	53	PAGE	171
Ç	<b>9</b> 00								
2	د		IF (QUATSD(1) EQ 0) GO 10 200 QUATSD(6) *5*( QUATSD(3)*TRAJSD	(11) + QUATSO(4)+TRAJSO(12)					
65		. +	QUATSD(7) = 0.5+( QUATSD(2)+TRAJSD + QUATSD(5)+TRAJSD	(11) + QUATSO(4)+TRAJSO(13)					
		÷ 1	QUATSO(8) * 0.5*( QUATSO(2)*TRAJSO - QUATSO(5)*TRAJSO - QUATSO(9) * 0.5*( QUATSO(2)*TRAJSO - QUATSO(4)*TRAJSO						
0,		200	CONTINUE  CONTINUE  IF (QUATAC(1) .EQ. 0) GO TO 300  QUATAC(6) *5*( QUATAC(3)*IRAJAC	(11) + QUATAC(4)+1RAJAC(12)					
75		- <b>-</b>	+ QUATAC(7) + O 5+( QUATAC(5)+TRAJAC QUATAC(2)+TRAJAC + QUATAC(5)+TRAJAC QUATAC(8) + O.5+( QUATAC(2)+TRAJAC	13)) (1) + QUATAC(4)+TRAJAC(13) (2)) (2) - QUATAC(3)+TRAJAC(13)					
80		300	- QUATAC(9) = 0.5*( QUATAC(5)*IRAJAC QUATAC(9) = 0.5*( QUATAC(4)*IRAJAC CONTINUE IF (QUATQA(1) EQ. 0.) GO TO 400						
85		Ŧ <b>Ŧ</b>	QUATDA(6) =5*( QUATDA(3)*TRAJOA + QUATOA(2)*TRAJOA QUATOA(7) = O.5*( QUATOA(2)*TRAJOA + QUATOA(5)*TRAJOA QUATDA(8) = O.5*(QUATDA(2)*TRAJOA(	11					
90		, , oo	- QUATOA(5) + TRAUDA QUATOA(9) + O.5+( QUATOA(2)+TRAUDA + QUATOA(4)+TRAUDA CONTINUE IF (QUATSA(1) EQ O.) GO TO 9000 CHATSA(5) - E E O.) GO TO 9000	11)) 13) + QUATDA(3)•TRAJOA(12) 11))					
95		* * <b>*</b>	<pre>dualsa(8) *5*( butsa(8)*)*(**)*(**)*(**)*(**)*(**)*(**)*(**</pre>	13) + GUALSA(4)*!RAUSA(12) 13) + GUATSA(4)*TRAUSA(13) 12) - GUATSA(3)*TRAUSA(13) 11) + GUATSA(3)*TRAUSA(12)					
8	-	0006	+ QUATSA(4)+TRAUSA 9000 CONTINUE RETURN END	(2)					

ō

15

50

52

- NOT LONG	COMPUTES FORCES AND MOMENTS ON SEAT/OCCUPANT DUE TO	N SEAT/OCCUPANT DUE TO
C METHOD .	RAIL INTERACTION	A GALLIS SOLDER B
	MOVE WITH THE SEAT. HOWEVER, BEFORE COMPUTING FORCES	. BEFORE COMPUTING FORCES
	AND MOMENTS DUE TO EACH SLIF	PER (SLIDER BLOCK), IT
	DECIDES IF THE SLIPPER (SLIDER BLOCK) IS ACTIVE AS	ER BLOCK) IS ACTIVE AS
U ¢	FOLLOWS:	ST HOLLOW THE SEAT BOTTON
<b>.</b>	COMPARED WITH THE INITIAL POSITION OF THE SELDER REDCK+	STITON OF THE STIDER REDCK
. U	THE SEAT HAS PASSED IT. TH	E SLIDER BLOCK IS INACTIVE
Ü	IF ON THE SEAT, THE CURRENT	POSITION OF THE SLIPPER
C	IS COMPARED WITH THE RAIL LENGTH.	NGTH. IF PAST THE TOP OF
v	THE RAILS, THE SLIPPER IS INACTIVE.	ACTIVE.
Ų,	FOR 'CONTINUOUS' SLIPPERS, THE PROGRAM ASSUMES THAT	HE PROGRAM ASSUMES THAT
ပ (	SLIPPERS (SLIDER BLOCKS) ARE	ACIIVE AI THE TUP OF
<b>.</b> .	THE SEAT (OR THE TOP OF THE	(OR THE TOP OF THE RAILS UNCE THE SEAT BEGINS*
ن د		ne sear builde, divile
C COMMUNICATIONS		
S	SEATOCC	
C CALLS:		
	ROTATE, RKTFM	
C NON-COMMON VARIABLES DEFINED	BLES DEFINED -	
	NONE	
C POTENTIAL ERROR CONDITIONS	CONDITIONS -	
0	NDNE	
	<b>教养教教教教教教教育的教育的教育的教育的教育的教育的教育的教育的教育的教育的教育的教</b>	************************
_	BLOCK	
C		******************
COMMON /CON	COMMON /CONSTNT / GRAVITY , RADDEG , DEGRAD , PI	, DEGRAD , PI
:	********************	******************
	SEAT/DCCUPANT FORCES COMMON BLOCK	
**************************************	**************************************	
ADL/ NOMEDO		•
• •		
• •	-	•
+		. FZCHSO(3)
•	•	, FZAESO ,
+	FXDRISO , FYDRISD	, FZDRTSO
Control of	• • • • • • • • • •	************
	t one entertainment of the contract of the con	
COMMON / IRAIL	IL / RAILNTH , RAILANG .	ISTRL . NSLBKS .
•	KXSB , KYSB	
•	٠	ZPOSRRE ,
•		ZPOSLRE ,
+	SB(6).	ZPOSSB(6)
A S	KXSB KYSB	MUSB

30

35

9

45

20

SUBROUT	SUBROUTINE RAILFM 74/74 OPT=1	-	FIN	4.6+428	83/11/07. 09.41.53	PAGE
90	CDMMON /ISETALN / + + REAL	XPOSSRP, Y ZCGSA, 1 IVZSA, H AREASA, H ZPOSBOT, X IXXSA, I	P. ZPOSSRP. X IXYSA . I PHISA . Y WGHTSA . X YPOSSCS. Z S, YPOSSCS. Z	. YCGSA 1YYSA THESA YPDSBOT.		
65	•				• •	
0,		MASSOA1 MA MASSOA1 MA MASSOA1 MA MASSOA1 MA	MASSCA2 , MASSCO MASSR(6) , MASSCO MASSCA2 , MASSCO MASSCR , MASSCO	, MASSO	: <b>: •</b>	
75	COMMON /MATRIX ,	3300	DCMRA(3,3), DCMSA(3,3) DCMTS(3,3), DCMTE(3,3) DCMOAE(3,3), DCMSR(3,3)	(0'0) (0'0)	•	
80	C MISCELLANEOUS DATA COMMON BLOCK	:	• • • • • • • • • • • • • • • • • • • •	•	•	
	COMMON /MISC	/ IPAGECT(31) MAXLINE	LINEGT(31) IPRTCNT(31)	IPRICNI(31)	•	
85	++++	IEVLINE IDATE HEADSR HEADROL	HEADALT HEADANT HEADVAW HEADVAW HEADVAW HEADWGT HEADWG	HEADVEL HEADPIT BIAS		
06			IEVENTS(38) IMVDC PRTINDX XYZ(3)	TIMES(38) PRIEMP(2) PKZVEL SAVTIME		
95	INTEGER	XACCEL ( REPTYPE PRTWGHT PRTEMP		ZACCEL(3) PRTLNG1 PRTINDX		
	C MOMARMS COMMON BLOCK			: :	• • •	
8	CDMMON /MDMARMS / +RETINSO .REFINOA .REFINSA .URX(6) .URY(6) .URZ(6) +XSSOCA(2).YSSOCA(2).XSSOCR(6).YSSORK(6).ZSSORK(6) +XSSORRE .YSSORRE .XSSORRE .XSSOLRE .XSSORRE .YSSORRE .XSSORRE .XSSORRE .YSSORRE .XSSORRE	A , REFLNSA , UR (2), ZSSOCA(2), XS: E , ZSSORRE , XS: E , ZSSOMRE , XS:	.URX(6) .URY(6) .XSSORK(6).YSSORK(6) .XSSOLRE .YSSOLRE .XSSORGT .YSSOBOT	.urz(6) .zssork(6). .zssolre .zssoro		
90	+XSSOSB(6),YSSOSB(6) +XSSCSAC ,YSSCSAC	, ZSSOSB(6) , ZSSCSAC	YRRCSAC YSSOSRP	ZSSOSRP .		
0,	+XSSASRP , VSSASRP , ZSSASRP , XRRDAP(2), YRRDAP(2), ZBRMFTF +XRRSB0(6), YRRSB0(6), ZSSOCP(2), YSSOCP(2), ZSSOCP(2), ZSSO	(6), ZRSSASRP XRRDAP (6), ZRRSBO(6), XSSOCP (2), ZSSDAP(2), XESDAC , ZSRCSAC XSSOAC , ZRSOSB XRRSBO , ZRSOSB XSSOCH , ZAACSO XASOAC	XRRDAP(2), YRRDAP(2), ZRDAP(2), XSSOCP(2), YSSOCP(2), ZSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOCP(2), XSSOAC, YSSOAC, YSSOCH(3), YSSOCH(3), XSSOCH(3), XSSOCH(	ZARDAP(2). ZSSOCP(2). ZESOAC. ZESOAC. ZESSOAC. ZRSSOAC. ZRSSOCP(3).		

•	C 4 C C C C C C C C C C C C C C C C C C
- 13	+XXSDAC 'YRSDAC 'XRSDAC 'XSCPAF(Z)'YSCPAF(Z)'ZSCPAF(Z)
	COMMON / KAILVRB / FXR , FZR , XDISF , VUISF
27-	
	**************************************
	TRAJSA(193) TRAJDA(193)
125	TVCEOS(225)
3	OUATOA(65)
	IPCPASS
	. IKSUMX
130	. X11VI .
	IYPRIX
	5×
	. 10117
135	
1	•••••••••••••••••••••••••••••••••••••••
	TMCASO(2) . TNCASO(2) .
	TLTUBSO TMTUBSO TNTUBSO
	3) TMSLSO(6)
140	TMRK50(6)
•	TMCHSD(3)
	+ TLAESO . TMAESO . TNAESO .
	+ TLDRTSO , TMDRTSO , TNDRTSO
	0
145	
	:
	IF (TEVENTS(5) .NE. 0) GO TO 9000
0	Consequence of the consequence o
2	
	IF (IEVENIS(1), E0. 0) 60 T0 9000
	IF ((ZRRSB01 - ZP0SB01) .LT. 0.000001) G010 125
155	1EVENTS(38) # 1
	TIMES(38) = TIME
į	C ROTATE GRAVITY TO S.C.S.
160	
	125 CONTINUE
	C 15 CATABILI 1 CONTITION HAS OCCIDED AND THE STATE (1991CHT
165	
) )	
	TE (ZGRAV TT O.) GO TO 9000
	:
	C TEST FOR RAIL CLEARANCE
170	
•	

```
PAGE
 83/11/07. 09.41.53
                                                                                                                                                  C ZERO OUT ALL FORCES AND MOMENTS DUE TO RAIL INTERACTION
C CANADAN CONTRACTION
                                                                                                                                                                                                                                                                                                                                                                                                C COMPUTE FORCES AND MOMENTS AT EACH SLIPPER (SLIDER BLOCK)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C FOR CONTINUOUS SLIPPERS, IF SLIPPER HAS MOVED OFF RAILS, PUT IT AT C TOP OF RAILS AND UPDATE MOMENT ARM
                                                                                                                                                                                                                                                                                    C COMPUTE ANGLE BETWEEN SEAT AND RAILS
C COMPUTE ANGLE BETWEEN SEAT AND RAILS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C TEST HERE IS FOR ON SEAT - TEST IF SLIPPER IS PAST TOP OF RAILS
                                                                                                                                                                                                                                                                                                                        PSISR = PSISA - RAILANG
ANGSR = - ASIN(DCMSR(1,3))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALL ROTATE (XRRSB,XRRSB,XSSOMRE,DCMSR,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF (PI .LE. ANGSR .AND. ANGSR .LE. 2 .+PI) ANGSR = ANGSR-2.+PI
                                                       IF (ABS(ZRASBOT) .LT. RAILNTH .OR. INTSTP .EQ. 0) GO TO 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (NSLBKS .NE. O .OR. ABS(ZRRSB) .LE. RAILNTH) GO TO 220
FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TEST IF SEAT BOTTOM IS PAST INITIAL POSITION OF SLIDER BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        **********************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C GET POSITION OF SLIPPER IN RCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (NSLBKS .NE. 0 .AND. ISTRL .NE. 0) GD TO 210
                                                                                                                                                                                     FXSLSO(1) = FYSLSO(1) = FZSLSO(1) = 0.0
TLSLSO(1) = TMSLSO(1) = TNSLSO(1) = 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (ABS(ZRRSB) .GT. RAILNTH) GO TO 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALL ROTATE (XRRSB.XYZ.ZVECT.DCMSR.O)
XSSGSB(1)*XYZ(1)+XSSGMRE
YSSGSB(1)*XYZ(2)+YSSGMRE
ZSSGSB(1)*XYZ(3)+ZSSGMRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF (NSLBKS EQ. 0) N=4
D0 300 I=1.N
IF (NSLBKS NE O AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        XDISP * XRRSB - XRRSBO(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YD1SP *YRRSB - YRRSBO(1)
   0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XYZ(1)=XSSOSB(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XYZ(2)=YSSOSB(1)
XYZ(3)=ZSSOSB(1)
                                                                       IEVENTS(5) = 1
TIMES(5) = TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XRRSB=XSSOSB(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YRRSB * YSSOSB(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZRRSB-25505B(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZRRSB=RAILNTH
                                                                                                                                                                     00 100 1=1,6
74/74
                                                                                                                                                                                                                                                 GO TO 9000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N=NSLBKS
                                                                                                                                                                                                                             100 CONTINUE
                                                                                                                                                                                                                                                                  200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220 CONTINUE
SUBROUTINE RAILFM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ပ ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        220
                                                                                                              175
                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225
```

\*

```
CALL ROTATE(XSSOMRE,XRRSB,ZVECT,DCMSR,1)
XRRSB=XRRSB+YRRSBO(I)
YRRSB=XRRSB+YRRSBO(I)
YRRSB=XRRSB+YRRSBO(I)
XYZ(1)=XSSOSB(I)
XYZ(2)=YSSOSB(I)
XYZ(2)=YSSOSB(I)
XYZ(3)=XSSOSB(I)
XYZ(3)=XSSOSB(I)
XYZ(3)=XSSOSB(I)
XYZ(3)=XSSOSB(I)
XYZ(3)=XSSOSB(I)
XYZ(3)=YSSOSB(I)
XYZ(3)=YSSOSB(I)
XYZ(3)=YSSOSB(I)
XYZ(3)=YRRSB
YDISP=XYZ(1)-XRRSB
YDISP=XYZ(1)-XRRSB
YDISP=XYZ(2)-YRRSB
CALL ROTATE(XRSB,XYZ,ZVECT,DCMSR,0)
CCOMPUTE FORCES IN RCS, THEN ROTATE TO SCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C COMPUTE TORSIONAL SPRING MOMENTS IN PITCH PLANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TLSLSG(1)*XYZ(2)*FZSLSG(1) - XYZ(3)*FYSLSG(1)
TMSLSG(1)*XYZ(3)*FXSLSG(1) - XYZ(1)*FZSLSG(1)
TNSLSG(1)*XYZ(1)*FYSLSG(1) - XYZ(2)*FXSLSG(1)
1F (2RRSB01 .GE. ZRRSB0(1)) GO TO 300
                                                                                                                                                                                                                                                                                                                                                             FYR--KYSB*YDISP
FZR--MUSB*SQRT(FXR*FXR+FYR*FYR)
CALL ROTATE (FXR,FXR,ZVECT,DCMSR,O)
FXSLSO(1)=FXR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TORPTCH - - YKTOR + (ANGSR-PSISR)
TMSLSO(1) - TMSLSO(1)+TORPTCH
                                                                                                                                                                                                                                                                                                                                          FXR*-KXSB*XDISP
                                                                                                                                                                                                                                                                                                                                                                                                                                                FYSL SO(1) *FYR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    F2SLS0(1)-F2R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C COMPUTE MOMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300 CONTINUE
                                                                                                                                                                                                                                                                                                                       240 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   275 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9000 RETURN
     230
                                                                                                            235
                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                       245
                                                                                                                                                                                                                                                                                                                                                                                                                             250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               265
```

```
C DESCRIPTION - LEVEL 3
C DESCRIPTION - LEVEL 3
C FUNCTION - CONTROLS SEQUENCING OF A RECOVERY CHUTE SYSTEM
C AND FULL INFLATION OF THE RECOVERY CHUTE, THEN
C COMMUNICATIONS -
C CALLED BY:
C CALLED BY:
C CALLES
C CALLS:
C CALLS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Corrections of the Correction 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C MISCELLANEOUS DATA COMMON BLOCK
Constitution of the contraction of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C..........COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Coordannessannessannessannessannessannessannessannessannessannessannessannessannessannessannessannessannessann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , IPRTCNT(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIWGHT(2)
TIMES(38)
PRTEMP(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +REFLNSO .REFLNDA ,REFLNSA .URX(6) .URY(6) .URX(6) .+X$SQCA(2).Z$SQCA(2).X$SQRK(6).Y$$QRK(6).Z$SQRK(6).
+X$SQRRE .Y$SQRRE .Z$SQRRE .X$SQLRE .Y$SQLRE .Z$SQLRE .
+X$SQMRE .Y$SQMRE .Z$SQMRE .X$SQBQT .Y$SQBQT .Z$SQBQT .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZACCEL(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XDIS - COMPONENTS OF THE VECTOR FROM THE RECOVERY CHUTE ZDIS - ATTACHMENT POINT TO THE RECOVERY CHUTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SAVTIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAXEVNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HEADVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HE ADP I T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRTINDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRTLNGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PKZVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMON /MATRIX / DCMAE(3,3) , DCMRA(3,3) , DCMSA(3,3) 
DCMSE(3,3) , DCMTE(3,3) , DCMTE(3,3) 
DCMSAE(3,3) , DCMOAE(3,3) , DCMSR(3,3) 
DCMDUM(3,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TVEL - TOTAL VELOCITY OF THE RECOVERY CHUTE SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HEADWGT PRTLNGT(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , LINECT(31)
, MAXREPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YACCEL(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . IERRFLG
. HEADALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . HEADYAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT INDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRTMASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (E)ZAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HEADROL
Reptype(5,31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           / IPAGECT(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (HEADER(24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C POTENTIAL ERROR CONDITIONS: NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIMASS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      XACCEL(3)
REPTYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NON-COMMON VARIABLES DEFINED -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZVECT(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IEVL INE
IDATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MAXL INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRTWGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HEADSR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PCHUTFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMON /MOMARMS / +REFLNSO . REFLNDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZL ININT
SUBROUTINE RECOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ROTATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMON /MISC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INTEGER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           00000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
```

S	•					ZARMPE	
	+XSSASRP +XRRSBO(6).	YSSASRP YRRSBO(6)	ZSSASRP ZRRSBO(6)	.XSSOCP(2).YSSOCP(2)	AP(2)	, ZRRDAP(2), , ZSSOCP(2),	
	+XSRCSAC +XRSOSB +XRRSB	YSRCSAC YRSOSB YRSSB		3	80T H(3).	ZSSOAC . ZRRSBOT . ZSSOCH(3).	
2	+XAACSD , YAACSD , ZAACSD +XRSOAG , YRSOAG , ZRSOAG C++++++++++++++++++++++++++++++++++++	YAACSO , YRSDAC , YRSDAC , COMMON BLDCK	•	.XASOAC .YASOAC . .XSCPAP(2).YSCPAP(2).	YASOAC YSCPAP(2),	.ZASOAC ,ZSCPAP(2) ************************************	:
	Consession (Daboust / 1860)	01 / TIMO	105007	**************************************	•	********	•
	COMMON /PAKCHO!	•	I KECUV RFCDRAG	RECOVED.	•	POROSR	•
	• •	X	XRECAP	,	• •	ZRECAP	
75	<b>*</b> ·	2	NPTSRLS	RECOVIS(2)	2,25)	IFTRECV	•
	+ +	=	TOPOGUE	, RECOVET(2.25)	. (9)	DROGPOS	•
	• •	2	POROSD2	VELCON		1FTDR02	
	•	ď	NPTDF12	DROGFT2(2,25)	25),	1FTDR01	
80	+ -	d i	NPTDFT1	, DROGFT1(2,	. (22)	IDROGLS	•
	• 1	Ž	NPTSDLS	. DROGLS(2,25)		TOUPLOY	
	• •		DISPLUT	, UKUGLL POPUSD 1	•	DROKAGI	-
	• •	Š	DROVELY	DROVELZ	• •	XDROGAP	
	•	Ā	YDROGAP	, ZDROGAP	•	CHAL T1	٠
	<b>→</b> ·	Ŧ.	CHAL T2	GLIMIT	•	TOELAY	•
	• •	A#(	AKEAUC TED2	TENDS.	•	TOPOGIA	•
	• •	2002	2	NPTSRDT	. <i>.</i>	RECOVDT (2,25)	. (9
			****			•••••••	•
	C INTEGRATION ROUTINE COMMON BLUCK	UTINE COMM	COMMON BLOCK	****	*	*******	• • •
		UTTA / TI	TIME , TIMES		-	TRAJSO( 193)	
	•	TR	TRAUSA( 193)	. TRAJOA( 193)		TRAJCH(97,3)	
	*	æ	TRAJAC( 193)	. TVCEQS(225)	ਰ	QUATSD(65)	
	•	3	QUATSA(65)	. QUATOA(65)	კ:	QUATAC(65)	
	+ -	Z	INISIP	I PCPASS		IKKPASS	
	• •	2 2	21212	. 17A		IVERCON	
	- +	<u>`</u>	XIX	X11X1		IVIOX	
	•	X	YPR12X	IPYIX		IPYI 1X	
	*	١	Y13X	IVPRIX	`.	IVPRIIX	
	+	10	ICYIX	-			
		***	****	*****	****	*********	****
	C SEAT/OCCUPANT FORCES COMMON BLOCK	FURCES COM	MON BLOCK	*******	•	*********	•
	COMMON /FORCESO	\	FXCASO(2) ,	FYCASO(2) , FZ	FZCAS0(2		
	•	X.	FXTUBSO .	•	FZTUBSO	•	
	•	×	FXSLS0(6)		F 25L 50(6		
	<b>•</b> •	X.	FXRKSO(6)	•	F ZRK SO( 6		
	• •	X .	FXCHSD(3)	FYCHSO(3) . P.C.	F 20HSO(3		
	• •	ζ <u>&gt;</u>	r varso		r zantan		

0PT=1

```
C COMPUTE RECOVERY CHUIE POSITION

Content to the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C CHECK FOR RECOVERY CHUIE FULL INFLATION

C. CHECK FOR RECOVERY C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TVEL = SQRT(TRAJCH(5,3)*TRAJCH(5,3) + TRAJCH(8,3)*TRAJCH(8,3) +
TRAJCH(7,3)*TRAJCH(7,3)

| TRAJCH(7,3)*TRAJCH(7,3)
| CALC TITRECV . EQ. 0) GDT0 25
| CALC ZLININI(TVEL, RECOVET, NPTSRFT, 25, TFP3,2)
| GDT0 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              R ± SORT(TRAUSD(14)+TRAUSD(14) + TRAUSD(15)+TRAUSD(15) + TRAUSD(16)+TRAUSD(16))
1F(R EQ. 0.0) GOTO 400
                                                 CALL PCHUTFT(TVEL,RECOVPD,RECDRAG,POROSR,TFP3)
GOTO 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALL ROTATE(XYZ(1), XYZ(1), ZVECT(1), DCMSE, 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF(IEVENTS(26) .NE. O) GOTO 60
IF(INISTP .EQ. O) GOTO 60
IF(TIMES .LT, (TIMES(25) + TFP3)) GOTO 60
IEVENTS(26) = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IF ( IEVENTS ( 28 ) . NE. O ) GOTO 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ICHUTE = 3
CALL CHUTFM(ICHUTE, RECOVPD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C COMPUTE RECOVERY CHUTE FORCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XYZ(1) = XSSOCH(3)
XYZ(2) = YSSOCH(3)
XYZ(3) = ZSSOCH(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIMES(26) - TIME
10 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONT I NUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220
                                                                                                                                                            175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         225
```

SIN2 = TRAUSO(16)/R

```
PAGE
    83/11/07. 09.41,53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WRITE(5,410)
410 FORMAT(2X.//72(1H+)/,4X,"FATAL ERROR(SUBROUTINE RECDV1)+++
+ "R EQUAL TO ZERO RESULTS IN DIVISION BY ZERD",/,72(1H+))
500 CONTINUE
RETURN
END
 FTN 4.6+428
                                                                                                                                                                                                                                                                                                                R = SQRT(TRAJDA(5)+TRAJDA(6)+TRAJDA(6)
TRAJDA(7)+TRAJDA(7))
IF(R : EQ. Q.O) GOTG 400
                                                                                                                XDIS = -SIGN((RECOVLL.COS2.COS(BETA)), TRAJSO(14))
YDIS = -SIGN((RECOVLL.COS2.SIN(BETA)), TRAJSO(15))
ZDIS = -SIGN((RECOVLL.SIN2), TRAJSO(16))
                                                                                                                                                                                                                                                                                                                                                                                                                                                * -$IGN((RECOVLL*COS2*COS(BETA)),TRAJOA(5))
* -SIGN((RECOVLL*COS2*SIN(BETA)),TRAJOA(6))
* -SIGN((RECOVLL*SIN2),TRAJOA(7))
                                                                                                                                                                                 TRAJCH(2,3) = XYZ(1) + XDIS + TRAJSD(2)
TRAJCH(3,3) = XYZ(2) + YDIS + TRAJSD(3)
TRAJCH(4,3) = XYZ(3) + ZDIS + TRAJSD(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRAJCH(2.3) = XYZ(1) + XDIS + TRAJDA(2)
TRAJCH(3.3) = XYZ(2) + YDIS + TRAJDA(3)
TRAJCH(4.3) = XYZ(3) + ZDIS + TRAJDA(4)
GOIO 500
                                                  COS(ASIN(SIN2))ZARCTAN(TRAJSO(15), TRAJSO(14))
                                                                                                                                                                                                                                                                                                                                                                                SINZ = TRAJOA(7)/R
COS2 = COS(ASIN(SIN2))
BETA = ZARCTAN(TRAJOA(6),TRAJOA(5))
   0PT=1
                                                                                                                                                                                                                                                  GOTO 500
                                                                                                                                                                                                                                                                                 75 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                XD1S
Y01S
Z01S
SUBROUTINE RECOV
                                                                                 U U
                                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                U
                                                                                                                                                                                                                                  O
                                                                                                                                                                                                                                                                ပ
                                                                                                                                                                                                                                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U
                                                                  230
                                                                                                                                                 233
                                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                   245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   260
```

### CONTRINGENTION - FUNCTION - FUNCTION - INTITION - FUNCTION - INTITION - I	-	SUBROUTINE REINTEG	
		DESCRIPTION - FUNCTIONAL	************
		FUNCTION - INITIALIZE	ESS
0.0000000000000000000000000000000000000	en	METHOD - ZEROES OUT	TS APROPRIATE .
			R CATAPULT +
			PANT SEPARATION
	5		• •
	?		•
800000		CALLS	•
00000			•
			•
<b>.</b>	<del>.</del>		•
200			*************
<b>U</b>			*****
			*************
+ TRAJSA(193) TRAJOA(193) + TRAJSA(193) TVCEOS(225) + OUATDA(65) OUATDA(65) + FINALAC(193) TVCEOS(225) + OUATDA(65) OUATDA(65) + OUATDA(65) OUATDA(65) + OUATDA(65) OUATDA(65) + OUATDA(65) OUATDA(65) + OUATDA(65) OUATDA(11) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(OUATSO(1)) CALL REINZRO(OUATSO(1)) CALL REINZRO(OUATSO(1)) CALL REINZRO(OUATAC(1)) CALL REINZRO(OUATAC(1)) CALL REINZRO(OUATAC(1)) IREIN * O INTSTP = 1 IPOINTS = 1 IPOINTS = 1 IPOINTS = 1 IPOINTS = 0 IRCRASS = 0 IR	20	COMMON /RKUTTA / TIME , TIMES , DELTAT	TRAUSO( 193)
+ TRAJAC(193) TVCEQS(225) + TRAJAC(193) TVCEQS(225) + TRAJAC(193) TVCEQS(225) + TRAJAC(193) TYCEQS(225) + TRAJAC(225) TACAC(225) + TRAJAC(225) +		TRAJSA( 193)	TRAJCH(97.3)
+ OUNTSA(65) . QUATDA(65) .  + INTSTP		) TVCEQS(225)	QUATSO(65)
+ INTSTP		. OUATDA(65)	QUATAC(65)
+ IPOINTS		, IPCPASS ,	IRKPASS
+ INX	25	INTS	IYPRX
+ IVIX + IVYBIX + IVYBIX + IVPRIX - IVP		•	IKPASSX .
+ IV13X IYPRIX - ICVIX		•	IVI2X
TOTAL  CALL REINZRO(TRAJSO(1))  CALL REINZRO(TVCGO(1))  CALL REINZRO(QUATSA(1))  CALL REINZRO(QUATSA(1))  CALL REINZRO(QUATSA(1))  CALL REINZRO(QUATSA(1))  CALL REINZRO(QUATSA(1))  CALL REINZRO(QUATAS(1))  CALL REINZRO(QUATAS(1))  INTSTP = 1  IPOINTS = 1  IP		•	IYPRIIX .
CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSO(1)) CALL REINZRO(TRAJSA(1)) CALL REINZRO(TRAJSA(1)) CALL REINZRO(TRAJCH(1,1)) CALL REINZRO(TRAJCH(1,2)) CALL REINZRO(TRAJCH(1,2)) CALL REINZRO(QUATSO(1))		2x	IPYI 1X
CALL REINZRO(TRAJOS(1) CALL REINZRO(TRAJOS(1) CALL REINZRO(TRAJOS(1) CALL REINZRO(TRAJOC(1) CALL REINZRO(TRAJOCH(1, CALL REINZRO(TRAJOCH(1, CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) INTSTP=1 IPDINTS=1 IPDINTS=1 IPDINTS=1 IPOZORS=0 IRREPASS=0 RETURN END	90	ICY1X	IREIN
CALL REINZRO(TRAUGA(1) CALL REINZRO(TRAUGA(1) CALL REINZRO(TRAUGA(1) CALL REINZRO(TRAUGH(1, CALL REINZRO(TRAUGH(1, CALL REINZRO(TRAUGH(1, CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) IREIN = O INTSTP = 1 IPDINTS			
CALL REINZKOU (RAUSCA) CALL REINZRO (TRAUGC) CALL REINZRO (TRAUCH) CALL REINZRO (TRAUCH) CALL REINZRO (TRAUCH) CALL REINZRO (QUATSO) CALL REINZRO (QUATSO) CALL REINZRO (QUATSO) CALL REINZRO (QUATSO) INTSTP=1 IPDINTS=1 IPDINTS=			
CALL REINZRO(TRAUGH(1) CALL REINZRO(TRAUGH(1) CALL REINZRO(TRAUGH(1) CALL REINZRO(TRAUGH(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATAC(1) INFIN * O INTSTP = 1 IPOINTS = 1 IPOIN			
CALL REINZRO(TRAUCH(1, CALL REINZRO(TRAUCH(1, CALL REINZRO(TRAUCH(1, CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) INSTP=1 IPOINTS=1 IPOINTS=1 IPOINTS=1 IPCPASS=0 RETURN	į		
CALL REINGRO(TRADOLT) CALL REINGRO(TVCEOS(1) CALL REINGRO(QUATSO(1) CALL REINGRO(QUATSO(1) CALL REINGRO(QUATSO(1) CALL REINGRO(QUATSO(1) INSTP=1 IPOINTS=1 IPOINTS=1 IPOENTS=1 I	e e	REINZRO(TRAUCH(1,	
CALL REINZRO(TVCEOS(1) CALL REINZRO(TVCEOS(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATSO(1) CALL REINZRO(QUATAC(1) IREIN * O INTSTP * I IPOINTS * I IPOINTS * I IPOINTS * I IREASS * O RETURN END		BETWEEN TOALCHE	
CALL CALL CALL CALL CALL INTSI INTSI IPDIN IRKPA IRKPA IRKPA IRKPA IRKPA		DE INZOCINEDO( 1)	
CALL CALL CALL CALL INTSI IPOIN IPOPA IPCPA IPCPA IPCPA IPCPA			
CALL CALL IREIN IPOIN IPCIN IRKPA IRKPA EETUR	40		
CALL REIN INTST INTST IPOIN IPCEN IRKPA IRKPA END			
IREIN = INTSIP= ( INDINTS= ( IPOINTS= ( IPCPASS= ( IRKPASS= ( IRRPASS= ( IRRP			
		IREIN = 0	
		INTSTP=1	
IPCPASS=0 IRKPASS=0 RETURN END	45	IPOINTS=1	
IRKPASS=O RETURN END		IPCPASS=0	
RETURN END		IRKPASS=0	
		AETUAN SETUAN	
		Q <del>V</del>	

	SUBROUTINE REINZRO	REINZRO	74/74	0PT=1	T=1 FIN 4.6+428	<b>6</b> 0	83/11/07 09 41 53	60	=	53	PAGE	183
_	_	SUBR	OUT INE RE	INZRO	SUBROUTINE REINZRO(ARRAY)							
	<b>.</b> .	DESCRIPT	ION - FUN	CT 10	**************************************	•						
			10N - ZER	5	ZERO OUT INTEGRATION ARRAYS							
en			HOO - 2ER PAS	SED 1	ZERDES OUT ALL VALUES PAST THE DERIVATIVES IN THE ARRAY PASSED IN THE CALL. BASED ON THE NUMBER OF EQUATIONS IN	ARRAY DNS IN						
	J	U	E	ARRI	RAY.							
	J	C COMMUNICATIONS -	ATIONS -									
	J	CAL	LED BY:									
0		v	REI	REINTEG	9							
	J	υ	CALLS:									
	J	ပ	NON	¥								
	J	C POTENTIAL	L ERROR CONDITIONS	DADIT	1110NS -							
	J		NON									
15		********	*******	•	*******************	******						
		DIMEN	ASION ARR	AY (22	225)							
		1F (7	ARRAY(1)	£0.	. 0) GO TO 9000		•					
		NSTAR	RT-ARRAY (	1)+2								
		NSTOF	P = 16 * ARR	AY(1)	1)+1							
20		00	NO 1=NSTAL	RT NS	NSTOP							
		ARRAY	0.0=(1)									
		100 CONT	INUE									
		9000 RETUR	Z									
		QNJ			END							

PAGE

-	
	VERSION KGESSAB - DATED 7 NOVEMBER 1983
,	
es S	
	C DESCRIPTION - LEVEL 2
	• CONTION - CONTROL THE CREATION OF CHIEFLY BEDOLD AS
ō	SPECIFIED BY THE INPUT FLAGS.
	C METHOD - THIS ROUTINE WILL CALL ALL OF THE REPORT WRIT-
	ING SUBROUTINES BASED ON A VALUE STORED IN
	ARRAY IREPTS .
51	EACH POSITION OF THE ARRAY REPRESENTS ONE
	OF THE REPORT SUBROUTINES (1.E.
	REPRIZ). IF THE VALUE OF A SLOT IN
	7 4
ç	IS EXECUTED.
Ş	NOTE: REPORT
	IS GENE
	C LOCATION.
90	
Ç.	. < 4
	IREPTS(2) = 1 ROUTINE REPRT2 IS
	11
30	C IF IREPTS(2) * O ROUTINE REPRT2 IS IGNORED .
}	
	C NOTE: REPRIS IS CALLED FOR EACH OF THE 6 ROCKET
	AS A FORMA
35	40
	EX. CALL REPRT13(
	:
	٠
0	
	C COMMONICATIONS -
	C CALLED BY
45	· INTL2
	CALLS
50	
	C REPRIA
ខា	
	C ARPRIS

REPRITI  REPRIZI  REP	REPRIZE  REP	REPRI REPRI REPRI REPRI					
REPRITE  REPRITE  REPRITE  REPRIZE  REP	REPRIJE  REPRIZE  REP	REPRI REPRI REPRI	=			•	
REPRIZE  REP	REPRIZE  REP	REPRT REPRT DEDDT	12			•	
REPRIZE  REP	RERRIZO RERRIZO RERRIZO RERRIZO RERRIZO RERRIZO RERRIZO REPRIZO REPRIZ	REPRI	13			•	
REPRIZO  REP	REPRIZE  REP	TOGSO	19			•	
REPRIZE  REP	REPRIZA  REP	- 5 - 3 - 5	20			•	
REPRIZE REPRIZ REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE	REPRIZE  REP	REPRI	2.0			•	
REPRIZE A REDRI WARTER EACH WORD IN THE ARRAY REPRESENTS A REDRI WARTER EACH WORD IN THE ARRAY REPRESENTS A REDRIZE COMMON VARIABLES DEFINED REPRIZE R	### ### ### ### ### ### ### ### ### ##	10030	.55			•	
REPRIZE REPRIZ REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE	REPRIZE REPRIZ REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE	10000	1 0			•	
REPRIZE A REDRET WAITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS DESCRIBED ABOVE.  POTENTIAL ERROR CONDITIONS:  NOME  COMMON / IREPORT / IREPISCATION REPRESCATION AND REPR	REPRIZE REPRIZ REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE REPRIZE	10030	2.4				
REPRIZE REPRIZ	REPRIZE  REP	7777 1011	47			,	
REPRIZE	REPRIZE NON-COMMON VARIABLES DEFINED  COMMON VIREDORY / IREPISION NONE  COMMON VIREDORY / IREPISION NONE  COMMON VIREDORY / IREPISION NONE  Thirger REPRIZE RE	REPRI	25			•	
REPRIZE  NONE  COMMON / IREPRIZE  NONE  COMMON / IREPRIZE  REPRIZE  REPRIZE	REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  NON-COMMON VARIABLES DEFINED  CONTAINS - INTEGER ARRAY PASSED AS AN ARGUMEN!  WHERE EACH WOOD IN THE ARRAY REPRESENTS  A REPORT WITHING SUBROUTINE AND  CONTAINS A VALUE OF 1 OR O AS  SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPIS (31)  COMMON / IREPORT / IREPORT / IREPORT / INTEGER  WAXINE HEADOR  TERREG (1)  TERR	REPRT	26			•	
REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  NON-COMMON VARIABLES DEFINED  OCNTAINS A VALUE OF 1 OR 0 AS  DESCRIBED ABOVE.  NONE  NONE  COMMON / IREPIS(31)  INTEGER  MAXEUR  COMMON / IREPORT / IREPIS(31)  INTEGER  MAXEUR  HEADVEL  COMMON / MISC / IPAGECT(31)  INTEGER  MAXEUR  HEADVEL  HEADVEL  REPRIZE(3)  INTEGER  HEADVEL  REPRIZE(3)  INTEGER  HEADVEL  HEADVEL  REPRIZE(3)  INTEGER  HEADVEL  REPRIZE(3)  INTEGER  HEADVEL  HEADVEL  REPRIZE(3)  INTEGER  REPRIZE(3)  INTEGER  HEADVEL  REPRIZE(3)  REPRIZE(3)  INTEGER  HEADVEL  REPRIZE(3)  RE	REPRIZE  REPRIZE  REPRIZE  REPRIZE  REPRIZE  NON-COMMON VARIABLES DEFINED  ANHER EGNA WORD IN THE ARRAY REPRESENTS  CANTAINS A VALUE OF 1 OR O AS  DESCRIBED ABOVE.  BOTENITAL ERROR CONDITIONS:  SECTION 2 COMMON BLOCK  COMMON VIREDORY / REPORT 131 - 1012 PI3  INTEGER  HEADROL HEADRIL HEADRIL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL  REPLYBE GAS ANTON SATTHE  SECTION ANTON BLOCK  COMMON MISC / IPAGECT(31) LINECT(31) RARRED  HEADROL HEADRIL HEADRIL  HEADROL HEADRIL HEADRIL  HEADROL HEADRIL  HEADROL HEADRIL HEADRIL  HEADROL HEADRIL  REPLYBE GAS ANTON SATTHE  ZVECT(3) XYZ(3) SATTHE  REPLYBE GAS ANTON MARCH  PRIMASS PRINNX  INTEGER FOR THE BRILD HEADRIL  PRIMASS PRINNX  INTEGER FOR THE BRILD HEADRIL HEADRIL  PRIMASS PRINNY  INTEGER FOR THE BRILD HEADRIL HEADRIL  PRIMASS PRINCE	REPRI	27			•	
REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO INFEGER ARRAY PASSED AS AN ABGUMENT WHERE EACH WORD IN THE ARRAY REPRESENTS A REPORT WITING SUBROUTINE AND CONTINUE OF 1 OR O AS DESCRIBED ABOVE.  FORMON INFECRIATIONS:  COMMON / REPORT / REPRISO IN PREPRO, PIT, PIZ, PIZ INTEGER  MAXETER  COMMON / REPORT / REPRISO IN INFERCION IN INFERCUTOR  COMMON / REPORT / REPRISO IN INFERCION IN	REPRIZO REPRIZO REPRIZO REPRIZO REPRIZO RONN-COMMON VARIABLES DEFINED  NON-COMMON VARIABLES DEFINED  POTENTIAL ERROR CONDITIONS:  NOME  COMMON / IREPORT / IREPIS(31)  COMMON / IREPORT / IREPOR	REPRI	28			•	
REPRIZIO  REPRIZIO  IREPTIATO  IREPTIATO  IREPTIATO  IREPTIATORIA  WHERE RACHA WORD IN THE ARRAY REPRESENTS  A REPORT WRITING SUBROUTINE AND  CONTAINS A VALUE OF 1 OR O AS  DESCRIBED ABOVE.  NONE  COMMON Z COMMON BLOCK  COMMON Z Z COMMON BLOCK  COMMON Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	REPRIZO  NON-COMMON VARIABLES DEFINED  IREPIS - INIEGER ARRA PASSED AS AN ARGUMENI WHERE EACH WORD IN THE ARRAY REPRESENTS A REPORT WRITING SUBROUTINE AND COMMON BELOCK  SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPIS(2)   PRIFRO, PII, PI2, PI3 INTEGER BRITEQ, PII, PI2, PI3 INTEGER BRITEQ, PII, PI2, PI3 INTEGER BRITEGO, BRITEGO, PII, PI2, PI3 INTEGER BRITEGO, B	REPRI	29			•	
NON-COMMON VARIABLES DEFINED  IREPIS - INTEGER ARRAY PASSED AS AN ARGUMEN!  WHERE EACH WORD IN THE ARRAY REPRESENTS  A REPORT WRITING SUBROUTINE AND CONTINIA ABOVE.  FOOTMAN IN THE PRESENTE ABOVE.  SECTION 2 COMMON BLOCK  COMMON / IREPIS(31) PREPRESON PREPRO, PIT, PIZ, PI3  INTEGER  WISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) INTEGER (10)  HAALINE (10)  HAALINE (10)  HEADSR (14)  HEADSR (14)  HEADSR (14)  HEADSR (14)  HEADSR (15)  HEADSR (13)  HEADSR (	NON-COMMON VARIABLES DEFINED  NON-COMMON VARIABLES DEFINED  POTENTIAL ERROR CONDITIONS:  NONE  COMMON / IREPORT / IREP'S(31)	REPRI	30			•	
NON-COMMON VARIABLES DEFINED  NON-COMMON VARIABLES DEFINED  A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS CONTAINS A VALUE OF 1 OR O AS CONTAINS A VALUE  NONE  COMMON / IREPORT / IREPIS 31) INTEGER  COMMON / MISC / IPAGECT(31) HEADOR / HEA	NON-COMMON VARIABLES DEFINED  IREPTS - INIEGER ARRA PASSED AS AN ARGUMENT WHERE EACH WORD IN THE ARRAY REPRESENTS A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR 0 AS DESCRIBED ABOVE.  NONE  COMMON / IREPORT / IREPTS(31) PRIFRO, P11, P12, P13 INTEGER  WASCELLAMEOUS DATA COMMON BLOCK  COMMON / IREPORT / INEQTS(31) LINECT(31) IPRICNT(31)  WASCELLAMEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) LINECT(31) IPRICNT(31)  WASCELLAMEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) IRRAFELD  HEADWOT HEADWOT BRINGT  HEADWOT HEADWOT BRINGT  HEADWOT PRIMASS(2) PRILAGOT PRIMASS(31)  HEADWOT PRILAGOT PRILAGOT PRILAGOT  HEADWOT PRILAGOT PRILAGOT  HEADWOT PRILAGOT  HEADWOT PRILAGOT  HEADWOT PRILAGOT  HEADWOT PRILAGOT  HEADWOT PRILAGOT  HEADWOT PRILAGOT  HANGER  HEADWOT PRILAGOT  HANGER  HEADWOT PRILAGOT  HANGER  HEADWOT PRILAGOT  HANGER  HANG	REPRI	-			•	
NON-COMMON VARIABLES DEFINED	NON-COMMON VARIABLES DEFINED  IREPTS - INTEGER ARRAY PASSED AS AN ARGUMENT WHERE EACH WORD IN THE ARRAY REPRESENTS A REPORT WILLING SUBROUTINE OF 1 DR O AS DESCRIBED ABOVE.  POTENTIAL ERROR CONDITIONS:  NONE  COMMON / IREPTS(31) PRZ-P13 PRZ-P13  INTEGER COMMON MISC / IPAGECT(31) LINECT(31) IPRZ-P13  HEADSC / IPAGECT(31) LINECT(31) RAXENIT HEADST    HEADSC / IPAGECT(31) RAXENIT HEADST    HEADSC / IPAGECT(31) RAXENIT    HEADSC / IPAGECT / IPAGECT(31) RAXENIT    HEADSC / IPAGECT / IPA					•	
MHERE EACH WORD IN THE ARRAY REPRESENTS  A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS DESCRIBED ABOVE.  NONE	POTENTIAL ERROR CONDITIONS:    NONE	NON-COMMON VARIABLE	S DEFINED			•	
REPTS - INTEGER ARRY PASSED AS AN ARGUMENT	TREPIS - INTEGER ARRAY PASSED AS AN ARGUMKINI WHERE EACH WORD IN THE ARRAY REPRESENTS A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS DESCRIBED ABOVE.    POTENTIAL ERROR CONDITIONS:   POTENTIAL SUBPLICATION   POTENTIAL ERROR CONTIONS:   POTENTIAL ERROR CONTIONS:   POTENTIAL ERROR CONMON BLOCK					•	
##ERE EACH WORD IN THE ARRAY REPRESENTS  A REDORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS DESCRIBED ABOVE.  NONE  COMMON / IREPORT / IREPTS(31) PRTFRO, P11, P12, P13  INTEGER PARTED IN PRTFRO, P11, P12, P13  INTEGER PARTED IN INTERPRONTING I	##ERE EACH WORD IN THE ARRAY REPRESENTS  A REDRIANS A VALIDE OF 1 OR O AS  DESCRIBED ABOVE. F 1 OR O AS  DESCRIBED ABOVE. F 1 OR O AS  BOTTON 2 COMMON BLOCK  COMMON / IREPORT / IREPTS(31) PRTERO, P11, P12, P13  INTEGER ADDRESS OF A COMMON BLOCK  COMMON / IREPORT / IREPTS(31) PRTERO, P11, P12, P13  INTEGER ADDRESS OF A COMMON BLOCK  COMMON / MISC / IREPTS(31) PRTERO P11, P12, P13  INTEGER ADDRESS OF A COMMON BLOCK  COMMON / MISC / IREPTS(31) PRTERO P11, P12, P13  INTEGER ADDRESS OF A COMMON BLOCK  HEADOR / IREPTS(31) PRTERO P11, P12, P13  INTEGER ADDRESS OF A COMMON BLOCK  PRINAGE (24) REPROSS OF A COLE (3)  INTEGER REPTYPE OF A COLE (3)  INTEGER REPTYPE OF A COLE (3)  INTEGER BROWN BLOCK  PRINAGE OF A COLE (3)  INTEGER BROWN BLOCK  INTEGRATION ROUTINE COMMON BLOCK	IRFPI		AY PASSED AS AN	ARGUMENT	•	
A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR 0 AS DESCRIBED ABOVE.  NONE  COMMON / IREPORT / IREPTS(31) PRIFRQ, P11, P12, P13  INTEGER  WISCELLANEGUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) LINECT(31) PRICKNT(31)  WAXREPT COLUMN  HEADSOL HEADSOL HEADVEL  HEADSOL HEADSOL HEADVEL  HEADSOL HEADSOL HEADVEL  HEADSOL HEADSOL HEADVEL  TOTAL HEADSOL HEADVEL  HEADSOL HEADSOL PRIVENT(31) PRIVENT(31)  HEADSOL HEADVEL  HEADSOL HEADVEL  HEADSOL  HEADVEL  HEADVEL	A REPORT WRITING SUBROUTINE AND CONTAINS A VALUE OF 1 OR O AS DESCRIBED ABOVE.  POTENTIAL ERROR CONDITIONS:  NOME  COMMON / IREDRY / IREDRS(31) PITCA			ORD IN THE ARRAY	BEDRESENTS	•	
COMMON / IREPORT / IREPISCATIONS SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPISCATION SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPISCATION SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPISCATION SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPISCATION SECTION SECTI	DESCRIBED ABOVE   DESCRIBED ABOVE		TOTAL TRAINS	TIME CHOOSILING	A 510	•	
DESCRIBED ABOVE.  DESCRIBED ABOVE.  NONE  COMMON SIGNATIONS:  COMMON VIREPOST / IREPTS(31) PRTFRQ, P11, P12, P13  INTEGER  WAXINE FROLELIANE WAXEPT  TEVLINE FROM HEADOWE.  HEAD	COMMAINS A VALUE OF 1 OR 0 AS  DESCRIBED ABOVE.  NONE  SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREP'S(31) PRIFRO, PI1, PI2, PI3  INTEGER  COMMON / MISC / IPAGECT(31) LINECT(31) IPRTCNT(31)  MAXEVNT  HEADROL LINE HEADRAL		A KETUKI KKI	ING SUBRUUIINE	AND	•	
DESCRIBED ABOVE.   DESCRIBED ABOVE.   DOJENTIAL ERROR CONDITIONS:   NONE	DESCRIBED ABOVE.		CONTAINS A V	ALUE OF 1 OR 0	<b>V</b> S	•	
NONE  SECTION 2 COMMON BLOCK  COMMON /IREPORT / IREPTS(31)  INTEGER  MISCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31)  TOTAL	NONE		DESCRIBED AB	OVE.		•	
NONE	NONE					•	
SECTION 2 COMMON BLOCK	NONE	POTENTIAL ERROR CON	DITIONS			•	
SECTION 2 COMMON BLOCK	SECTION 2 COMMON BLOCK					•	
SECTION 2 COMMON BLOCK   SECTION 2 COMMON BLOCK   COMMON NICOK   SECTION 2 COMMON NICOK   SECTION 2 COMMON NICOK   SECTION	SECTION 2 COMMON BLOCK   SECTION 2 COMMON / IREPIS(31)   PRIFRQ, P11, P12, P13	NON				•	
SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPTS(31) . PRIFRQ, P11, P12, P13  INTEGER PATFRQ, P11, P12, P13  MAXENT MAXENT  MAXENT  MAXENT  MAXENT  MAXENT  MAXENT  MAXENT  MAXENT  HEADALT  HEADALT  HEADALT  HEADALT  HEADALT  HEADALT  HEADALT  HEADRA  HEADYAW  HEADPIT  HEADRA  HEADYAW  HEADRA  HEADYAW  HEADRA  HEADYAW  HEADRA  HEADYAW  HEAD	SECTION 2 COMMON BLOCK  COMMON /IREPORT / IREPTS(31) , PRTFRQ.P11,P12,P13  INTEGER PATFRQ.P11,P12,P13  INTEGER PATFRQ.P11,P13  INTEGER PATFRQ.P11  INTEGER PATFRQ.P11,P13  INTEGER PATFRQ.P11,P13  INTEGER PATFRQ.P11,P13  INTEGER PATFRG.P11,P13  INTEGER PATFRG.P11  INTEGER PATFRG.P11,P13  INTEGER PATFRG.P11					•	
SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPTS(31)	SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREPTS(31) . PRTFRQ.P11.P12.P13  INTEGER  WISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) . LINECT(31) . IPATCN*(31)  **COMMON / MISC / IPAGECT(31) . LINECT(31) . IPATCN*(31)  **COMMON / MISC / IPAGECT(31) . LINECT(31) . IPATCN*(31)  **COMMON / MISC / IPAGECT(31) . LINECT(31) . IPATCN*(31)  **COMMON / MISC / IPAGECT(31) . LU  **COMMON / MISC / IPAGECT(31) . ITAGES(38) . ITAG	*************	************	************	************	••••	
COMMON   IREPORT   IREPTS(31)   PRIFRQ, PI1, PI2, PI3	SECTION 2 COMMON BLOCK	**************	*************	*************	***********	•••	
COMMON / IREPORT / IREP15(31)  COMMON / IREP15(31)  INTEGER  MISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31)  HEADORT	COMMON / IREPORT / IREPTS(31)	SECTION 2 COMMON	BLOCK			•	
COMMON /IREPORT / IREPTS(31) PRTFRQ.P11.P12.P13  INTEGER PRTFRQ.P11.P12.P13  MISCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) LINECT(31) IPRTCNT(31)  + IEVLINE IERRELG LU  HEADSR HEADALT HEADVEL  + HEADSR HEADMGT BLAS  + HEADSR HEADWGT BLAS  + HEADWGT BRINDX BLAS  + KACCEL(3) KYZ(3) SAVINE  + PRIWGHT BRIWGH  + PRIWGHT BRIWGH  + PRIWGHT BRIWGH  + PRIMON BLOCK	COMMON /IREPORT / IREPTS(31) , PRTFRQ.PI1.PI2.PI3  INTEGER  MISCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) LINECT(31) IPRCONT(31)  HAXEDI   MAXEDI   MAXEDI   MAXEVNI    HEADALT   HEADALT   HEADALT   HEADPIT    HEADSR   HEADALT   HEADPIT    HEADSR   HEADMAT   HEADPIT    HEADSR   HEADWAT   HEADPIT    HEADSR   HEADWAT   HEADPIT    HEADSR   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADWAT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADWAT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADPIT    HEADWAT   HEADWAT   HEADWAT    HEADWAT   HEADWAT   HEADWAT    HEADWAT   HEADWAT	***************	************	*************	************	• • • •	
INTEGER  PRTFRO,PI1,PI2,PI3  MISCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) , LINECTNOT    HAZEVIT	INTEGER  PRTFRO,PI1,PI2,PI3  MISCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31)	COMMON /IREPORT	/ 1REPTS(31)	. PRIFRO, PI1, PI	2,P13		
MISCELLANEOUS DATA COMMON BLDCK  COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31) .  HEADLINE . LEVLINE . LEMBERT .  HEADLINE . LEMBERT .  HEADLINE . HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE . HEADLINE .  HEADLINE .  HEADLINE . HEADLINE .  H	MISCELLANEOUS DATA COMMON BLDCK  COMMON /MISC / IPAGECT(31) LINECT(31) IPRTCNT(31)  HAXENINE HERREG LU  HEADY HEADY HEADY HEADY  HEADSR HEADY HEADY  HEADY HEADY  HEADY HEADY  HEADY HEADY  HEA	INTEGER	PRIFRO, PI 1, PI	2,PI3			
		************	***********	***********	************	••••	
COMMON /MISC / IPAGECT(31) . IPRTCNT(31) .  +	COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31) . LU MAXLINE . MAXREPT . MAXEVNT . LU	MISCELLANEOUS DATA	COMMON BLOCK			•	
LINECT(31)   IPRTCNT(31)   MAXEWIT   MAXEWIT   MAXEWIT   LU   LU   LU   LU   LU   LU   LU   L	LINECT(31)   IPRTCNT(31)   MAXENT   MAXENT   MAXENT   LU   LU   LU   LU   LU   LU   LU   L	**************	***********	*************	*************	• • • • • • • • • • • • • • • • • • • •	
MAXREPT   MAXEVNI	MAXREPT	COMMON /MISC	/ IPAGECT(31)	. LINECT(31)	. IPRICNI(31)		
HEADAL   HEADVEL   HEADVEL   HEADVEL	HEADALF   HEADVEL   HAVOCEL(3)   SAVINE   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL(3)   HAVOCEL   HAVOCEL   HAVOCEL   HAVOCEL   HEADVEL	•	MAXLINE	. MAXREPT	. MAXEVNT	-	
HEADVEL   HEADVEL   HEADVEL   HEADVEL   HEADVEL   HEADVEL   HEADVEL   HEADVET   HEADVEL   HEADVET   HEAD	HEADSR   HEADVEL   HEADV	+	TEVI INF	TERREIG	77		
HEADSR   HEADYAW   HEADPILE	+ HEADSA HEADYAW HEADYIT HEADYAW HEADYIT HEADROL HEADWGT BIAS HEADWGT HEADWGT HEADYIT HEADWGT HEADWGT HEADWGT HEADWGT HEADYIT (2) PRIUNGT(2) PRIUNGT(2) PRIUNGT(3) PRIUNGT(3) PRIUNGT	•	TOATE	T PACA T	HEANVEL	•	
HEADTAN   HEATTAN   HEAT	HEADYAW   HEADYAW   HEADYAW   HEADYAW   HEADYAU		21401	140441	1140000	•	
+ HEADROL . HEADWGT . BIAS  REPTYPE(5,31) , PRILNGT(2) , PRIWGH(2)  HEADER(24) , IEVENTS(38) . TIMES(38) . TIMES(38) . TIMES(38) . TWUDC  PRIMASS(2) , PRIINDX . PRZVEL . ZVECT(3) . XYZ(3) . SAVINE . XACCEL(3) . YACCEL(3) . ZACCEL(3) . REPTYPE . BIAS . PRILNGT . PRIWGHT . PRIMASS . PRIINDX . INTEGRATION ROUTINE COMMON BLOCK	+ HEADMGT   HEADMGT    + REPTYPE(5,31)   PRTLNGT(2)   PRTWGHT(2)    + REPTYPE(24)   IEVENTS(38)   TIMES(38)    + REPTYPE(24)   INVDC   PRTYNDC    + TANDC   PRTYNDC   PRTYNEL    - TANDC   PRTYNDC   PRTYNEL    - TANDC   PRTYNDC    - TANDC   PRTYNEL    - TANDC   PRTYNDC    - TANDC    - TANDC   PRTYNDC    - TANDC   PRTYNDC    - TANDC   PRTYNDC	+	HEAUSK	. HEADIAW	. HEADPI	•	
31) PRILNGT(2) PRIWGHI(2) 1 IEVENTS(38) TIMES(38) 1 IMVDC PRTEMP(2) PRTEMP(2) PRZYEL XYZ(3) SAVTIME YACCEL(3) ZACCEL(3) BIAS PRILNGT PRTMASS PRIINDX	31) PRILNGT(2) PRIWGHT(2) 1 IEVENTS(38) TIMES(38) 1 IMVDC PRTEMP(2) PRTINDX PREMP(2) XYZ(3) SAVTIME YACCEL(3) ZACCEL(3) BLAS PRTINGT PRTMASS PRTINDX	*	HEADROL	. HEADWGT	. BIAS		
HEADER(24)   IEVENTS(38)   TIMES(38)   TIMES(38)   HEADER(24)   HEVENTS(38)   TIMES(38)   TIMES(38)   HEADER(27(3)   XYZ(3)   XYZ(3)   XYZ(3)   XYZ(3)   XYZ(3)   XYZ(3)   XYZ(3)   XZCCEL(3)   REPTYPE   BIAS   PRTLNGT   PRTWGHT   PRTEMP   PRTMASS   PRTINDX   INTEGRATION ROUTINE COMMON BLOCK	+ THEADER(24) IEVENTS(38) TIMES(38) + PRIMASS(2) PRTINDX PREMP(2) + ZVECT(3) XYZ(3) SAVIJNE + XACCEL(3) XYZ(3) SAVIJNE + REPTYPE BIAS + PRIMGHT + PRIMGHT + PRIMGHT - PRIMGHT - PRIMASS PRINDX - INTEGRATION ROUTINE COMMON BLOCK	•	REPTYPE (5,31)	•	. PRIWGH1(2)		
IMVDC PRTEMP(2) PRTINDX PKZVEL XYZ(3) SAVTIME YACCEL(3) ZACCE((3) B1AS PRTINGT PRTMASS PRTINDX	IMVDC PRTEMP(2) PRTINDX PKZVEL YYZ(3) SAVTIME YACCEL(3) PRTLNGT R1AS PRTLNGT PRTMASS PRTINDX	•	THE ADER (24)	1FVFNTS(38)	T[MFS(38)		
PRITION PREVEL XYZ(3) SAVTIME YACCEL(3) ZACCEL(3) BIAS PRIMASS PRIINDX	PRTINDX PREFERENCE AYZ(3) SAVTIME YACCEL(3) ZACCEL(3) BLAS PRTLNGT PRTINDX PRTINDX	. +		CC/41	DOTEMB( 2)	•	
PREVELL  YYZ(3) SAVINE  YACGEL(3) ZACGEL(3)  BIAS PRINGI  PRINDX	PRINDX PREVEL YYZ(3) SAVTIME YZCEL(3) SACCEL(3) BIAS PRILNGT , PRIMASS PRIINDX	•		224	/ Z ) LEGISTI		
XYZ(3) SAVTIME YACCEL(3) ZACCEL(3) BIAS PRINGI PRIMASS PRINDX	XYZ(3) SAVIME YACCEL(3) ZACCEL(3) BIAS PRILNGT PRIMASS PRIJNDX	•	PKINASS(2)	YOU IND	PREVEL		
+ XACCEL(3) YACCEL(3) ZACCEL(3) INTEGER REPTYPE BIAS PRTLNGT + PRTEMP PRTMASS PRIJNDX + INTEGRATION ROUTINE COMMON BLOCK	+ XACCEL(3) YACCEL(3) INTEGER REPTYPE , BLAS PRILNGT PRTEMPH , PRIMASS . PRIINDX INTEGRATION ROUTINE COMMON BLOCK	•	ZVECT(3)	. xYZ(3)	SAVIJME	•	
INTEGER REPIYPE BIAS PRINGT PRIMGHT PRIMASS PRINDX H PRIMON RUDINE COMMON BLOCK	INTEGER REPTYPE BIAS PRILNGT PRINGHT P	•	XACCEL(3)	. YACCEL(3)	. ZACCEL(3)		
, PRTMASS , PRTINDX	PRIMASS	INTEGER	REPTYPE	. BIAS	PRILNGI		
PRIMASS PRINDX	PRTMASS	•	PRIMGHI				
		+	PRIFMP	PRIMASS	PRTINDX		
			THE STATE OF THE S	, 18 mm	×200		
			COMMON BLOCK	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·	, *	
		***************************************	************	•••••••		• • • • • • • • • • • • • • • • • • • •	

115	<b>*</b> ·	TRAUSA	TRAUSA( 193)	TRAJOA(193)	TRAJCH(97,3)	
	<b>* * *</b>	QUATSA(65)	(65)	1VCEUS(223) QUATOA(65) IPCPASS	QUATAC(65)	
120	<b>* * * * *</b>	IPDINIS IKX IVIX IVI3X IVPRI2X	٠ بر	17X 1KSUMX 1711X 17PRIX 1P71X	IYPRX IKPASSX IVIZX IYPRI IX	
125	1CVIX IF(INTSTP . EQ. 0) GG TO 500 IF(TIMES . EO. 0.0) GGT 0 IF(PRTFRQ . NE. 0) GG TG 10 C	1CY1X .EQ. 0) GD TD .EQ. 0.0) GDTD .NE. 0) GD TD	500	1CY 1 1X	. ICYI1X . IREIN	
130	C IF PRIFRQ IS ZERD, PRINT EVERY O. 1 SECOND C	PRINT EVERY 0.1 SECOND SAVTIME) GDTD 500	GRY 0.1 S	ECOND		
135	66766	55553		ପ୍ରକ୍ଷା		
0	5665	55555		7 7 10 10		
145	50666		CALL REPRIST CALL REPRIST CALL REPRIST CALL REPRIST(1)	12(1) 13(2) 13(3)		
150	2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3			13(4) 13(5) 19(6)		
ន	16 (1REP1S(21) . 16 (1REP1S(22) . 16 (1REP1S(24) . 16 (1REP1S(24) . 16 (1REP1S(25) .		CALL REPRIZI CALL REPRIZZ CALL REPRIZZ CALL REPRIZS	- a c * s c		
160		55555		20.00 to 20.		
165	IF (IREPIS(31) . 500 CONTINUE RETURN END	EQ. 1) CA	CALL REPRISI	<del>-</del>		

C CALLED BY: INITLZ	C INPUT VALIDATION REPORT
•	. 27
C	
C COEFFICIENTS (USED	C COEFFICIENTS (USED IN SUBROUTINE AEROIN) COMMON BLOCK
COMMON /COEF	CDMMON /CDEF / CDEF(700.6)
CONTANTO COMMON BUDGE	######################################
	· · · · · · · · · · · · · · · · · · ·
COMMON /CONSTNT	
C SECTION 13 COMMON BLOCK	.ocx
C	• • • • • • • • •
COMMON /DYNCGIN / IDYNCG	
•	. XSLACK . SXP
<b>* *</b>	C7 . S7 . C2 . ZSLACK .
**************************************	***************
COMMON / EVMES	COMMEN / EVMES / IEVMES(3.38) . ISPMES(4.6) . ISPECL(6)
C OCCUPANT ALONE FORCES COMMON BLOCK	ES COMMON BLOCK
C	在我们的现在分词是有一种的,我们也有一种的,我们们也是我们的,我们们们们们的,我们们们们们们们们们们们们们们们们们们们们们们们们们们
COMMON /FORCEOA	COMMON /FORCEOA / FXCHOA(3) , FZCHOA(3) , + + + FXAEOA , FYAEOA , FZAEOA
C SEAT ALONE FORCES COMMON BLOCK	C SEAT ALONE FORCES COMMON BLOCK
COMMON /FORCESA / FXAESA	COMMON /FORCESA / FXAESA , FYAESA , FZAESA
C SEAT/GCCUPANT FORCES COMMON BLOCK	**************************************
COMMON /FORCESO /	/ FXCASO(2) .
•	, FYTUBSO ,
•	, FYSLSO(6) ,
÷ 4	EXCHED(3) FYRESU(6) . FIRESU(6) .
• •	FYAESO
	. FYDRISO . FZDRISO
C SECTION 4 COMMON BLOCK	
Catata Atata Atata Atata	**************************************
+	XIAIL VIAIL ZIAIL
•	H ROLL RVEL OVEL
•	WINDY
•	. NPTSAAT, AAT(4,50)
•	+ IACSFLG

9	COMMON /ICATPLT / INCAT . CATLN1(2), CATSTK(2),TCI (2), + xPOSAP(2) , YPOSAP(2), ZPOSAP(2),NPTSCT(2), + CATHRST(2.25.2), ITUBEND , KTUBE .CTUBE .
}	MUTUBE , EXTLNGT
į	SECTION 1 COMMON BLOCK
c e	ESTOP . IRESTRT, IPLOT . IDPIASE3
02	COMMON BLOCK
75	COMMON /IDARTIN / IDART . DRIFRCE . DRISTRT . DRISTOP . + XDRTAP(2), YDRTAP(2), ZDRTAP(2), + XDRTAP(2), ZDRTCP(2) . CC
08	COMMON /IDELTAT / DIPHAS1, DIPHAS2, DIPHAS3 C************************************
<b>8</b> 2	C SECTION 7 COMMON BLOCK  C SECTION 7 COMMON BLOCK
06	CDMMON / IRAIL / RAILNTH , RAILANG , ISTRL , NSLBKS , KYSB , MVSB , VKTOR , XPOSRRE , ZPOSRRE , ZPOSRRE , XPOSLRE , XPOSLRE , YPOSLRE , ZPOSLRE , XPOSLRE , XPOSSB(6), ZPOSSB(6) , XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPOSSB(6), XPSB , MUSB
<b>S</b>	C SECTION 2 COMMON BLOCK C COMMON / IREPORT / IREPTS(31) . PRTFRO.P11.P12.P13 INTEGER PRTFRO.P11.P12.P13
8	C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK  C
<b>\$</b> 05	COMMON /IROCKET / INRKT , RKDELY(6), RKNPTS(6), IROKOUT ,  RKIGN(6), RKWGHT(6), RKBURN(6), TSTAR(6),  ** XPOSRK(6), YPOSRK(6), ZPOSRK(6), RKTHRST(2.25.6)
0	

1.5	+	IXYSO .	1X2S0	IVYSD .	1 Y 2 S O	12250	•		
ļ.	•	ARFASO	ARFANA	ä					
		- VXXI	4 C > X	1 x 20 4	40271	1 > 204			
	•		40.00	1000		1000	•		
	+	12204	YC50Y	YCEOA.	¥0937	SUSEP			
	REAL	LXXSO ,	IXVSO	1X250	IYYSO	1 1 7 2 5 0			
120	•	12250	IXXOA	IXYOA	1 X 2 0 A	ADYVI .	-		
	+	IYZOA ,	1220A						
		*********	********	*********	********	*********	*****		
	C SECTION S COMMON BLOCK	OCK					•		
			*****	******		******	****		
		CODOCA /	9000000	7005000	2000	4000			
			1 C C C C C C C C C C C C C C C C C C C		1000				
	•	. Acu,	LAASA	TATAN.	1 A C 3 A	ACTVI.	•		
	+	1 Y Z S A	122SA	PHISA	PS1SA	THESA	•		
	•	ADFACA	HCHICA	NOT NOW	YOUSBUT	VPOSROT	,		
	•								
	+	ZP05801,	XPOSSCS	YPOSSCS.	ZPOSSCS				
130	REAL	IXXSA.	IXYSA	IXZSA	IYYSA	IYZSA			
	•	12754		•			•		
						****	4		
							•		
	C SECTION 12 COMMON BLOCK	DCK DCK					•		
							,		
135	COMMON /ITVCIN	, ITVC	MPHI	ISd#	#IE	•			
		10 1 100	PITCHDI	SMDI DAT TUCDI AV	TUCDIA				
	•	NOLLIN.				•			
	+	RXANG							
	1470	T T T T	1000	MTLIE					
	C	************************************	*******			•••••••	****		
	DIANCES COMMON BLOCK						•		
	mois neoch						•		
	•			:	:				
	COMMON /MASSES	/ MASSOA1	. MASSOA2	•	MASSSO	MASSO	•		
	+	MASSSA	. MASSRK(6		MASSOC				
	Q F A I	MASSOA	MASSOA2		MASSSO	MASSO			
571	+	MASSEA	MASSOK	,	MASSDC				
				- 4			4 4 4		
		:			•	:	•		
	C MATRIX COMMON BLOCK						•		
	C		:	************	*******	*********			
	COMMON /MATRIX	/ DCMAF(3.3)		DCMRA(3 3)	DCMSA(3.3)	3			
			•	•	2 4 4 5 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6				
220	•	DCMSE (3, 3)			DCMIE (3, 3	G			
	+	DCMSAE (3,3)		DCMOAE (3,3), [	DCMSR(3,3)	3)			
	+	DCMDUM(3.3	_						
						*****	***		
	C MI SCELLANE DUS DAIA C	UUS UAIA COMMUN BLUCK					• •		
000						٠,			
	DSIM/ NOMMOD	/ IPAGECI(31)	•	LINECT(31)	=	TEN COLUMN			
	+	MAXLINE	-	MAXREPT	3	MAXEVNT			
	•	TEVI INE		1 EDDE LC	=		•		
		10000	•	9					
	•	IDATE	•	HEADALT	Ĭ.	HEADVEL			
160	•	HEADSR	•	HEADYAW	Ξ.	HEADPIT			
	+	HEADROL	•	HEADWGT	æ	BIAS	•		
		טנטוריטניי		01.000		1	•		
	•	METITER (3.		PRICHGI(Z)	•	( P) ( USM )	-		
	•	I HE AUE K	24)	IEVENIS(38)	-				
	•		_	IMVDC		PRTEMP(2)			
165	•	PRIMASS (2	-	PRTINDX	ā	PKZVEL	•		
	•	74667(2)	•	****		CAVITABLE			
	•	(6) 17347		(0.00		2 T 1 T 1 T 1 T 1 T 1 T 1 T 1 T 1 T 1 T	•		
	•	XACCELISM	•	VACCEL(3)	7 .	ZACCEL(3)			
	INTEGER	PFPTYPF		RIAS	4	PRINCI			
				,					
	+	E E E E	•						
170	•	DDIEMD							
,				PR-MASS		PRIMOX			

2), ZSSOCA(2), XSSORK(6), YSSORK(6), ZSSORRE	COMMON /MOMARMS / +REFLNSO , REFLNDA	OMARMS /	REFLNSA .URX(6) .URY(6)	.URX(6)	.URY(6)	.URZ(6)	
**XSCORME 'XSSOBME 'XSSOBAT 'XSSOBAT 'XSSOBAT 'XSSOBAT 'XSSOBAT E 'XSSOBATE 'XSSOBAT E 'XSSOSAT E 'XSSOSAT E 'XSSOSAT E 'XSSOSAT E 'XSSOSAT E 'XSSOCAT E 'XSOCAT E 'XSSOCAT E 'XSOCAT E 'XSSOCAT E 'XS	+XSSOCA(2). VS +XSSORRE . VS	SOCA(2),	ZSSOCA(2) ZSSORRE	XSSORK(6) XSSOLRE	YSSORK(6)	ZSSORK(6)	
+ XSSASRP	+XSSOMRE .YS +XSSOSB(6).YS +XSSCSAC .YS	SOSB(6), SCSAC	ZSSOMRE ZSSOSB(6) ZSSCSAC		YSSOBOT YRRCSAC YSSOSRP	ZSSOBOT ZRRCSAC ZSSOSRP	
**************************************	+ +XSSASRP ,YS +XRRSBO(6),YR +XSSDAP(2),YS	SASRP RSBO(6)	ZSSASRP ZRRSBO(6) ZSSDAP(2)	XERDAP(2) XSSOCP(2) XESOAC	YRRDAP(2) YSSOCP(2)	ZARMPE , ZRRĎAP(2) , ZSSOCP(2) , ZESOAC	
SECTION 14 COMMON BLOCK  COMMON /PARCHUT / IRECOV	+XSRCSAC , YS +XRSDSB , YR +XRRSB , YR +XRACSD , YA +XRACSD , YA	RCSAC SOSB RSB ACSO	ZSRCSAC ZRSOSB ZRRSB ZAACSO	XSSOAC XRRSBOT XSSOCH(3) XASOAC	YSSOAC YRRSBOT YSSOCH(3) YASOAC	ZSSOAC ZRRSBOT ZSSOCH(3) ZASOAC ZSCPAP(2)	
COMMON / PARCHUT / IRECOV	C SECTION 14 COMMO	N BLOCK	:		•		:
WPTSRLS	COMMON /PARC	HUT / 15	·		>. 0	RECOVEL POROSR	
MECONFICE   DECORPE	•	X ;	ECAP	YRECA		ZRECAP	•
PORGENE   DROGFE   DROGFD   FTDROZ   PORGENE	+ +	<b>Ž Ž</b>	TSRFT	. RECOV	7(2,25)	SEPFRCE	•
HTDETI	+ 4	= 6	ROGUE	DRORA.		DROGP02	•
Horder   H	• •	2 3	TDF T2	OROGF.	(2(2,25)	IFTDR01	•
PORGEL   DROVELX   DROVELX   DROVELX   DROVELX   DROVELX   DROVELY   DROVELY   DROVELY   DROVELY   DROGAP   CHALT1   CHALT1   CHALT1   GLIMIT   TFP1   TFP2   TFP2   TFP3   TDROGLS   TFP3   TPP1   TFP2   TFP2   TFP3   TPROGLS   TFP3   TPROGLS   TFP4   TFP2   TFP2   TFP3   TFP4   TFP2   TFP3   TFP4   TFP4   TFP5   TFP4   TFP5   TFP4   TFP5   TFP4   TFP5   TRAUCH (97.3)   TRAUCH (93.4)   TRAUCH (	+ +	<b>Z</b> 2	10FT (	DROGE	(2,25)	IDROGL S	•
+ DROGEDI , POROSDI , DROVELX  - CHALT2	• •		SPLOY	DROGL		DRDRAGI	
### TORGGAP TORGAP CHALT  ###################################	+ +	2 2	OGPO (	POROSI		DROVELX	•
### CHALT2 GLIMIT TOFLAY ####################################	+	2	ROGAP	ZOROG	٠.	CHALT 1	•
TFP3	+ +	₽.	IALT2	GLIMI'		TOELAY	•
CDDC	• •	1	P2	1FP3		TOROGLS	•
### ### ##############################		5	•	- :		4	.25)
CDMMON /RAILVRB / FXR , FYR , FZR , XIISP , YDISP	C.RAIL VARIABLES O	OMMON BL	DCK				•
INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTTA / TIME, TIME5, DELTAT , TRAJSD(193) ,  TRAJSA(193) , TRAJOA(193) , TRAJCH(87,3) ,  TRAJAC(193) , TVCEQS(225) , QUATAC(65) ,  TRAJAC(193) , TVCEQS(225) ,  TRAJAC(193) , TVCEQS(225) ,  TRAJCH(197) , TVCEQS(225) ,  TRAJCH(197) , TVCEQS(225) ,  TRAJCH(197) , TVCEQS(225) ,  TRAJCH(197) , TVCEQS(225) ,  TYPRX , TYPRX ,  TYPRIX , TYPRIX ,  TYPRIX	COMMON /RAIL	VRB / FX	R . FY	1 F 2R	XD1S	P YDISP	
CDMMON /RKUTTA / TIME , TIMES , DELTAT , TRAJOS(193) , TRAJOA(193) , TRAJOA , TRA		INE COMIN	ION BLOCK	•	•	•	•
TRAUSA(193)   TRAUDA(193)   TRAUDA(193)   TRAUDA(193)   TVCEQS(225)   QUATSA(65)   QUATCA(65)   TVCPASS		TA / TI	ME TIME	•	• •	RAJSD(193)	•
TVCEQS(225) QUATOA(65) IPCPASS IYA IKSUMX IYIX IYIX IPVIX	•		AUSA (193)		٠.	RAJCH(87,3	
I PCPASS I YX	<b>+</b> ·	<b>≃</b> ∂	(AJAC( 193)	TVCEOS	•	UATSD(65)	•
INSUMY INTERPRETATION  TO PROTECT  TO PROT	• •	3 2	15TP	IPCPAS	•	RKPASS	
IKSUMX IV11X IVPRIX IPVIX	•	<u> </u>		××		VPRX	
IVIIX IVPRIX IPVIX	•	<u>×</u>	×	IKSOMX		KPASSX	•
IPVIX	• •	≥ ;	XI.	TYI TX	•	Y12X	•
	• •	- >	70.0 70.0	VI 1441 .	•	V. 1 M.	

235

240

	IBLANA = II
	LU = BIAS + 1
255	IF(TSTOP NE. 0.0 AND TIMES GE. TSTOP) GDTO 650
	Tr (ESTOP .NE. O .AND. IEVENIS(ESTOP) .NE. O) GOTO 650
	C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT
	C FOR PROGRAM CONTROL VARIABLES
260	
	WRITE(5,1101)   START   If (TSTOP .NE. 0.0) WRITE(5,1102) TSTOP
265	IF (TSTOP .EQ. 0.0) WRITE(5,1103)(IEVMES(1,ESTOP),1=1,3)
	WRITE(5,1104) WRITE(5,1105) IRESTRI
270	
	WRITE(5, 1112) IDRIFLG
	C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT
275	C FOR REPORT CONTROL FLAGS
	CALL HEADER
	WRITE(5, 1215)
280	00 20 K = 1,MAXREPT [F(IREPTS(K) .NE. 1) GO TO 20
	WRITE(5, 1220) K, (REPTYPE(1,K), I=1,5)
	ZO CONTINUE Controller controller
285	C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT

250

DIMENSION MEASURE(6)

C......C DAMPING COEFFICIENT COMMON BLOCK 

TNDRTS0

TMDRTSO TMAESO

PAGE

```
C FOR INTEGRATION TIME STEPS
                                                                                                                                         C.WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT
C FOR SEAT ALONE INITIAL CONDITIONS
C. FOR SEAT ALONE INITIAL CONDITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALL HEADER
WRITE(5,1500)
WRITE(5,1505) AREASA, PRTLNGT(PRTINDX), HGHTSA, PRTLNGT(PRTINDX),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .PRESSUR
.PRTWGHT(PRTINDX).PRTLNGT(PRTINDX).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WRITE(5,1506) PRTLNGT(PRTINDX)
WRITE(5,1506) PRTLNGT(PRTINDX)
WRITE(5,1506) PRTLNGT(PRTINDX)
WRITE(5,1507) XPOSSGT, XPOSSGS, VPOSSGT, YPOSSCS, ZPOSBGT, ZPOSSCS
WRITE(5,1510) PRTLNGT(PRTINDX)
PPHISA = PHISA*RADDEG
PPHISA = PSISA*RADDEG
PPHISA = PSISA*RADDEG
WRITE(5,1510) XPOSSRP, PPHISA , XCGSA
WRITE(5,1520) XPOSSRP, PPHISA , ZCGSA
WRITE(5,1520) ZPOSSRP, PTHESA , ZCGSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF(NPTSLAT .LT. 0) CSL = 4H ACS
CALL HEADER
WRITE(5, 1480) CSL, PRTLNGT(PRTINDX)
NPTS = 1ABS(NPTSLAT)
1F(1ABS(NPTSLAT) .LT. 1ABS(NPTSAAT)) NPTS = NPTSAAT
D0 40 K=1, NPTS
WRITE(5, 1490) (LAT(1,K), 1=1,4), (AAT(1,K), I=1,4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , PRILNGT (PRTINDX).
                                                                                                                                                                                                                                                                                                         . PRILNGT(PRIINDX).
. PRILNGT(PRIINDX).
. PRILNGT(PRIINDX).
. PRILNGT(PRIINDX).
                                                                                                                                                                                                                                                                                                                                                                                   WRITE(5, 1420) PRTLNGT(PRTINDX), PRTLNGT(PRTINDX)
PRVEL = RVEL-RADDEG
POVEL = QVEL-RADDEG
PPVEL = PVEL-RADDEG
WRITE(5, 1430) YPOS , HEADVAW, XACVEL , PRVEL
WRITE(5, 1440) YPOS , HEADVAW, XACVEL , PRVEL
WRITE(5, 1450) ZPOS , HEADVAW, ZACVEL , PRVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WHITELD, 1450) ZPGS , HEADROL. ZACVEL , PPVEL IF (NPISLAT . EQ. O . AND. NPISANT . EQ. O) GOTO 48 CSL = 4HEFCS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WRITE(5, 1530) PRIMASS(PRIINDX)
                                                              WRITE(5, 1300)
WRITE(5, 1310) DTPHAS1, PI1
WRITE(5, 1320) DTPHAS2, PI2
WRITE(5, 1330) DTPHAS3, PI3
                                                                                                                                                                                                                                                                                        DENSITY
                                                                                                                                                                                                                                                                                                             CKPITHT
                                                                                                                                                                                                                                                                                                                              WINDY
WINDY
WINDZ
                                                                                                                                                                                                                          CALL HEADER
WRITE(5, 1400)
WRITE(5, 1410) TEMP
                                           CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332
                                                                                        8
                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      315
```

```
PAGE
83/11/07. 09.41.53
                                                                                                                                C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT C FOR SEAT/OCCUPANT, OCCUPANT ALONE INITIAL CONDITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF (1STRL .NE. 0)
+WRITE(5,1720) PRTLNGT(PRTINDX),PRTLNGT(PRTINDX)
WRITE(5,1730) XPOSSB(1), XPOSSB(2), XPOSSB(3),
+ YPOSSB(1), YPOSSB(2), YPOSSB(3),
+ ZPOSSB(1), ZPOSSB(2), ZPOSSB(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        +WRITE(5.1740) PRTLNGT(PRTINDX).PRTLNGT(PRTINDX).PRTLNGT(PRTINDX) WRITE(5.1750) XPGSS8(4), XPGSS8(5), XPGSS8(6).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         +WRITE(5.1721) PRTLNGT(PRTINDX),PRTLNGT(PRTINDX),PRTLNGT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +WRITE(5,1741) PRTLNG!(PRTINDX),PRTLNG!(PRTINDX),PRTLNG!(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT C FOR RAIL INITIAL CONDITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WRITE(5,1710)
WRITE(5,1710) RAILNIH, PRTLNGT(PRTINDX), RAILANG*RADDEG,
KXSB , PRTWGHT(PRTINDX), PRTLNGT(PRTINDX),
KYSB , PRTWGHT(PRTINDX), PRTLNGT(PRTINDX),
FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRTWGHT (PRT INDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF(ISOSEP EQ. 0) WRITE(5, 1606)
IF(ISOSEP EQ. 1) WRITE(5, 1607) SOSEP
IF(ISOSEP EQ. 2) WRITE(5, 1608) SOSEP, PRIWGHI(PRIINDX)
WRITE(5, 1609) DMPGC
WRITE(5, 1619) PRILNGT(PRIINDX), XCGSO , YCGSO , ZCGSO
WRITE(5, 1615) PRIMASS(PRIINDX), PRILNGT(PRIINDX)
WRITE(5, 1620) IXXSO , IXYSO ,
IXZSO , IXYSO ,
IXZSO , IXYSO ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XPOSSB(4), XPOSSB(5), XPOSSB(6), YPOSSB(4), YPOSSB(5), YPOSSB(6), ZPOSSB(6), 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  #RITE($,1715)PRTLNGT(PRTINDX), PR

WRITE($,1716) XPOSRE, XPOSLRE,

+ YPOSRE, YPOSLRE,

+ ZPOSRE, YPOSLRE,

1F (NSLBKS.EQ. 0) GO TO 50

IF (ISTRL.EQ. 0) WRITE ($,1712) NSLBKS

IF (ISTRL.NE.0) WRITE ($,1711) NSLBKS

IF (ISTRL.EQ.0)
                                                                                                                                                                                                                                                                                                                                                                                    AREASO , PRTLNGT(PRTINDX).
AREADA , PRTLNGT(PRTINDX).
                                                                                                                                                                                                                                                                                                                                                                                                                            AREADA , PRTLNGT(PRTINDX),
HEADWGT, PRTWGHT(PRTINDX),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WGHTOAB, PRIWGHT(PRIINDX), WGHTOAA, PRIWGHT(PRIINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     50 WRITE (5,1712) NSLBKS
0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IF (ISTRL .NE. 0)
                                                                                                                                                                                                                                                                                                                              WRITE(5, 1600)
WRITE(5, 1605)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WRITE(5, 1713)
60 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CALL HEADER
74/74
                                                                                                                                                                                                                                                                                       CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        09 01 05
SUBROUTINE REPRIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     395
```

```
| F(INCAT EQ. 0) GQ TQ 101
| CALL HEADER | WRITE(5, 1900) | WRITE(5, 1900) | WRITE(5, 1905) | WRITE(5, 1905) | WRITE(5, 1905) | WRITE(5, 1900) | LATLNGT(PRTINDX) | WRITE(5, 1910) | LATLNGT(PRTINDX) | WRITE(5, 1920) | CATSTK(1) | PRTLNGT(PRTINDX) | WRITE(5, 1930) | TCI(1) | ZPOSAP(1) | WRITE(5, 1930) | TCI(1) | ZPOSAP(1) | TE (TUBEND NE. 2) GQ TQ 85 | CALL HEADER | WRITE(5, 1935)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . PRIWGHT(PRIINDX) . PRILNGT(PRIINDX) . PRIUGHT(PRIINDX) . PTIUGE
                                                                                                                                                                                                                                                                                                                   MUTUBE , PTUBE EXTLNGT, PRTLNGT(PRIINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WRITE(5,11000)
WRITE(5,11000)
WRITE(5,11010) INRKT . PRTLNGT(PRTINDX)
DO 102 I=1.INRKT
WRITE(5,11020) I.RKIGN(I).PRTLNGT(PRTINDX),XPOSRK(I).
+ (RKALPH(I)*RADDEG)
WRITE(5,11030) RKWGHT(I).PRTWGHT(PRTINDX),YPOSRK(I).
+ (RKRETAI)*RADDEG)
WRITE(5,11040) RKBURN(I),ZPOSRK(I).
+ (RKGAMA(I)*RADDEG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WRITE(S, 11070) K, PRIWGHI(PRTINDX), PRIWGHI(PRIINDX)
INDX = RKNPTS(K)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO TO 101
WRITE(5, 1985) PRIWGHT(PRTINDX), PRIWGHT(PRIINDX)
                                                                                                                                                                                                                                                                                                                                                                                 IF(INCAT.EG.2) GO TO 95
WRITE(5, 1975) PRTWGHT(PRTINDX)
INDX * NPTSCT(1)
DO 90 K = 1, INDX
WRITE(5, 1980) CATHRST(1,K,1), CATHRST(2,K,1)
90 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF(NPTSCT(2).GT.INDX) INDX=NPTSCT(2)
DO 100 K=1,INDX
WRITE(5,1990) CATHRST(1,K,1).CATHRST(2,K,1).
+ CATHRST(1,K,2).CATHRST(2,K,2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IF(RKNPTS(K) .LT. 1) GO TO 150 CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(INRKT .EQ. 0) GO TO 200 CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WRITE(5, 11050) RKDELY(1)
                                                                                                                                                                                                                                                                            WRITE(5,1940) 'TUBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DO 150 K * 1, INRKT
C FOR CATAPULT PARAMETERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INDX=NPTSCT(1)
                                                                                                                                                                                                                                                                                                                                                           85 CONTINUE
CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TO 1 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
 $
                                                                                                                                                                                                 014
                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    455
                                                                                                                                                                                                                                                                                                  15
                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  435
```

```
C WRITE HEADER INFO (VIA SUBROUTINE HEADER) AND VALIDATION REPORT ... C FOR DROGUE CHUTE INITIAL CONDITIONS

Commencement of the conditions of the condition
                                                                                                                                                                                                                                                                                                                                                                                                                      PRTLNGT(PRTINDX)
PRTLNGT(PRTINDX)
PRTLNGT(PRTINDX)
PRTLNGT(PRTINDX)
PRTLNGT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IF (TTTREAD EQ 0.AMD. IFTOROT.EO.O.AMD. IDROGLS.EO.O)
IF (NPTOFT 2.EO.O.AMD. NPTDFT1.EO.O.AMD. NPTSDLS.EQ.O)
VELUNIT-9H(FT/SEC)
IF (PRTINDX.EO.1) VELUNIT-9H(MET/SEC)
CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .PRTLNGT(PRTINDX)
.PRTWGHT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . PRTLNGT (PRTINDX) . PRTLNGT (PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . PRTLNGT(PRTINDX) . PRTLNGT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , PRTLNGT (PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                      PRIWGHT (PRIINDX) .
PRIUGI (PRIINDX) .
PRILNGT (PRIINDX) .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0. 1) WRITE(5, 15005)
0. 2) WRITE(5, 15006)
0. 150PLQY
0. 150PLQY
0. 160PLQY
0. 160PLQQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRTLNGT(PRTINDX),
XDROGAP
YDROGAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              410 CONTINUE
IF (IDROGUE NE. 3) GO TO 425
WRITE(5,15085) DRDRAG2
DROGED2
WRITE(5,14000)

IF (IDYNCG EQ 2) GD TO 35C
WRITE(5,14002)

GD TO 375
350 CONTINUE
WRITE(5,14003)
375 CONTINUE
WRITE(5,14010) CY
WRITE(5,14010) CY
WRITE(5,14010) CY
WRITE(5,14020) SXP
WRITE(5,14020) SXN
WRITE(5,14030) SY
WRITE(5,14030) SXN
WRITE(5,14030) SXN
WRITE(5,14030) SXN
WRITE(5,14030) SXN
WRITE(5,14030) SXN
WRITE(5,14030) SXN
WRITE(5,14030) ZSL
WRITE(5,14030) ZSL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DROGLL
DROGPD1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZDROGAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DROVELZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DRORAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POROSD 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALL HEADER
WRITE(5,15000)
JF(1000GUE EQ. 1
IF(1000GUE EQ. 2
WRITE(5,15040)
WRITE(5,15045)
WRITE(5,15045)
WRITE(5,15045)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WRITE (5, 15080)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF ( IDROGLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          425 CONTINUE
                                                                                                                                                                                                                                                                                     520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                565
```

PAGE

```
1102 FORMAT(3X, "EJECTION SIMULATION STOP ITME = ".F.10.4///)
1103 FORMAT(3X, "EJECTION SIMULATION STOP EVENT = ".BX,3(A10)///)
1104 FORMAT(5X, "VARIABLE", 20X, "VALUE", 20X, "OFFINITION"/)
1105 FORMAT(5X, "IRESTRE", 23X, 12, 18X, "RESTART ",
1106 FORMAT(5X, "IRESTRE", 23X, 12, 18X, "UNITS OF MEASURMENT (",
1106 FORMAT(5X, "ISRATIN", 23X, 12, 18X, "SEAT ALONE TRAJECTORY SWITCH (",
1106 FORMAT(5X, "ISRATIN", 23X, 12, 18X, "PLOTTING FILE SWITCH (",
1107 FORMAT(5X, "IDLOT ", 23X, 12, 18X, "PLOTTING FILE SWITCH (",
1111 FORMAT(5X, "ISOS.P ", 23X, 12, 18X, "SEAT/OCCUPANT SEP. SWITCH (",
1111 FORMAT(5X, "ISOS.P ", 23X, 12, 18X, "SEAT/OCCUPANT SEP. SWITCH (",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 •••••••••••••••••••••••••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C FORMAT STATEMENTS FOR PROGRAM CONTROL VARIABLES VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1100 FORMAT(10(/), 52X, "PROGRAM CONTROL VARIABLES", 5(/))
1101 FORMAT(3X, "EJECTION SIMULATION START TIME = ", F10.4,
+ "(1F > 0 FRUM RESTART FILE)"/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WRITE(5,16500) PRILNGT(PRTINDX) , PRTLNGT(PRTINDX) + PRILNGT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                       IF(NPISRDI GI 1) GOTO 540
WRITE(5,16400) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
NUM = NPISRLS
           RECOVLL , PRILNGT(PRIINDX)
RECORAG , RECOVPD
PRILNGT(PRIINDX) , POROSR
                                                                                                                                                                                 IF(IRECDV EQ 2) WRITE(5,16006) GLIMIT/GRAVITY IF(NPTSRDT EQ 1) WRITE(5,16003) TRDPLDY IF(NPTSRDT GT 1) WRITE(5,16004) WRITE(5,16020) PRTLNGT(PRTINDX),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RECOVDI(2.1)
RECOVES(2.1)
RECOVFI(2.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WRITE(5,16410) RECOVLS(1,1) , RECOVLS(2,1) RECOVFT(1,1) , RECOVFT(2,1)
                                                                                                             PRTLNGT(PRTINDX), CHALT2
PRTLNGT(PRTINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUM = NPTSRDT
IF(NPTSRLS .GT. NUM) NUM = NPTSRLS
IF(NPTSRFT .GT. NUM) NUM = NPTSRFT
DO 550 I=1,NUM
                                                                                                                                                                                                                                                                                                                                                                                                                                 IF (NPTSRFT GT. NUM) NUM = NPTSRFT
DO 530 I=1,NUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WRITE(5, 16510) RECOVDT(1,1)
RECOVES(1,1)
RECOVFT(1,1)
520 CONTINUE
WRITE(5,16010) RECOVLL
                                                                                                                                                                 WRITE(5, 16005) TOELAY
                                                                                                                                                                                                                                                                                                                                         ZRECAP
                                                                                                                                                                                                                                                                                                                 YRECAP
                                                                                              CHALT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GD 10 9000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                650 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        530 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   550 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G010 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540 CONTINUE
                                                   630
                                                                                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          675
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 680
                                                                                                                                                                        632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 655
```

PAGE

SUBRO	SUBROUTINE REPRIT 74/74 OPT=1 83	83/11/07: 09 41
68 5	+ "O = WILL NOT OCCUR, 1 = WILL OCCUR BASED ON TIME"/, + 102x,"2 = WILL OCCUR BASED ON FORCE)"/)  1112 FORMAT(SX,"IDRIFILG". 23x,12,18X,"DYNAMIC RESPONSE INDEX SWITCH", + " (O= NOT COMPUTED   1 = COMPUTED)")	
069	C FORMAT STATEMENTS FOR REPORT FLAGS VALIDATION REPORT  C. FORMAT STATEMENTS FOR REPORT FLAGS VALIDATION REPORT  12.10 FORMAT(3(1/2)) 30X, "OUTPUT REPORTS: THE FOLLOWING REPURTS WILL BE ", "COLE. STEPS")	
695	1215 FORMAT(30X, "REPORT NO.", T50, "TITLE"/, 30X, 10(1H-), T50, 5(1H-)/) 1220 FORMAT(34X, 13, 175, 5(A10)) C+++++++++++++++++++++++++++++++++++	
007	1300 FORMAT(10(/), 44X, "INTEGRATION TIME STEPS AND PRINT FREQUENCIES". + 3(/), 77X, "INTEGRATION STEP", 14X, "PRINT"/, 82X, "(SEC)", 18X,  + "FREQUENCY") 1310 FORMAT(/, 10X, "PHASE 1 (INITIATION TO RAIL CLEARANCE)", 27X,  + "DTPHAS1 « ", F10.5, 9X, "PI1 » ". I5)	
705	1320 FORMAT(/, 10X, "PHASE 2 (RAIL CLEARANCE TO SEAT/OCCUPANT",  + " SEPARATION)", 13X, "DTPHAS2 = ", F10.5, 9X, "P12 = ", 15)  1330 FORMAT(/, 10X, "PHASE 3 (SEAT/OCCUPANT SEPARATION TO COMPLETION)",  + 17X, "DTPHAS3 = ", F10.5, 9X, "P13 = ", 15)  C.***********************************	
017	C. COMMAN STANDARD STOR AIRCRAFT INFITAL CONDITIONS VALUATION REPORT OF A TAO FORMAT(3(/),52%, "AIRCRAFT INITIAL CONDITIONS",3(/)) 14 10 FORMAT(54%, "AIRMSPHERIC CONDITIONS"//,37%, "TEMPERATURE". 4 7% "(TEMPE); "FID 4" DEG "410/, 4 7% "ARADOM POESCIPE" (OBESCIPE" FID 4" MILITAAD"/	
715	+ 37X   MIR DENSITY   (DENSITY)   ", F10.4, 1X.44, "/", A2, ", *.43, "/ . 43, "/ . 42, "/ . 4	
720	1420 FORMAT (41NDZ) 1420 FORMAT (41NDZ) + 10X."LINEAR VELOCITY (FFCS)", 7X,"ANGULAR VELOCITY (ACS)", + 19X."(".A2.")", 25X,"(DEG)", 23X,"(".A2."/SEC)", 20X, + "(DEG/SEC)", 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	
725	<u>u</u>	
7.30	× × ·	
7.15	1490 EURN	
740	(*************************************	

750

755

760

765

```
+ F10.4,1X,A2,"**2"/,
+ 36x,"OCCUPANT ALDNE EFFECTIVE DRAG AREA (AREADA): ",
+ 50x,"SEAT/OCCUPANT WEIGHT (WGHTSD): ",
+ 50x,"SEAT/OCCUPANT ALDNE WEIGHT BEFORE SEAT/OCC SEPARATION(WGHTOAB): ",
+ 22x,"OCCUPANT ALDNE WEIGHT BFFORE SEAT/OCC SEPARATION(WGHTOAB): ",
+ 510.4,1X,A2/,
+ 52x,"OCCUPANT ALDNE WEIGHT AFTER SEAT/OCC SEPARATION(WGHTOAA): ",
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1520 FORMAT(15X, "YPOSSRP: ",F10.4,22X,"PITCH (PSISA): ",F10.4,22X,
+ "YCGSA: ",F10.4)
1525 FORMAT(15X,"ZPOSSRP: ",F10.4,22X,"VAW (THESA): ",F10.4,22X,
+ "ZCGSA: ",F10.4//)
1530 FORMAT(15X,"MOMENTS OF INERTIA",G1X,"(",A4,"-",A2,"**2)"//,
+ 58X,"IXXSA: ",F10.4/,58X,"IYYSA: ",F10.4/,
+ 58X,"IXZSA: ",F10.4/,58X,"IZZSA: ",F10.4/,
+ 58X,"IYZSA: ",F10.4/,58X,"IZZSA: ",F10.4/,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ## 54X,"HEIGHT (HGHTSA): "F10.4.1X.A2.//

# 54X,"WEIGHT (HGHTSA): "F10.4.1X.A2.//)

# 54X,"WEIGHT (WGHTSA): "F10.4.1X.A2.//)

# 36X,"(",A2."): 46X,"(",A2.")"/)

# 36X,"(",A2."): 46X,"(",A2.")"/)

# 56Y, "XPOSBOT: "F10.4.31X,"XPOSSCS: "F10.4.//

# 28X,"YPOSBOT: "F10.4.31X,"XPOSSCS: "F10.4.///)

# 52X,"YPOSBOT: "F10.4.31X,"XPOSSCS: "F10.4.///)

# 52X,"COTION OF SEAT REFERENCE POINT (SCS)",

# 15X,"ORIENTATION (ACS): "22X,"LOCATION OF SEAT ALONE CG (SCS)",

# 20X,"(",A2,")",40X,"(DEG)",40X,"(",A2,")//)

# 50X,"(",A2,")",40X,"(DEG)",40X,"(",A2,")//)

# 51S FDRMAT(BX,"A0SSRP: "F10.4.22X,"ROLL (PHISA): "F10.4.22X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1606 FORMAT(40X, "SEAT/OCCUPANT SEPARATION DOES NOT OCCUR"///)
1607 FORMAT(40X, "SEAT/OCCUPANT SEPARATION OCCURS (" " SOSEP): ", F10.4, " SEC AFTER INTIATION")
1608 FORMAT(37X, "SEAT/OCCUPANT SEPARATION OCCURS AT (" " SOSEP): ", F10.4, 1X, A2." PARACHUTE FORCE")
1609 FORMAT(40X, "AERODYNAMIC DAMPING COEFFICIENT (DMPGC): ", + F10.4, ///)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1600 FORMAT(5(/),43X, "SEAT/OCCUPANT, OCCUPANT ALONE INITIAL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       + " CONDITIONS", 5(/))
1605 FORMAT(42X, "SEAT/DCCUPANT REFERENCE AREA (AREASO): ".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1610 FORMAT (44X, "LOCATION OF SEAT/OCCUPANT C.G. (SCS)"/,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1615 FORMAT (454, "SEAT/DCCUPANT MOMENTS OF INERTIA"/,
+ 54X,"(",44,"-",42,"++2)",/)
1620 FORMAT (53X "IXXSO: ",F10.4/,
+ 53X,"IXXSO: ",F10.4/,
+ 53X,"IXYSO: ",F10.4/,
+ 53X,"IYYSO: ",F10.4/,
+ 53X,"IYYSO: ",F10.4/,
+ 53X,"IYYSO: ",F10.4/,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   + 59x, "(", A2,")"//, 53x, "XCGSO: ",F10.4/, + 53x, "YCGSO: ",F10.4/, 53x, "ZCGSO: ",F10.4/,)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            + F10.4, 1X, A2)
```

770

775

785

780

390

```
PAGE
83/11/07 09 41.53
                                                                                                                                  Construction of Catabult Parameters (1) | 1900 FORMAT(S(/)) 56x, "Catabult Parameters", 4(/) | 1905 FORMAT(S(x), *Number of Catabults; ".13/, + 90x, "Location of Catabult"/, 89x, "attachment Points (SCS)"/, + 98x, "(".A2,")")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1715 FORMAT (2(/), 42x, "LOCATION OF RAIL ATTACHMENT POINTS (ACS)", 56x, "(",42,")", //,31x, "RIGHI",46x, "LEFI", /)
1716 FORMAT(25x, "XPOSRRE: ", F10.4,30x, "YPOSLRE: ", F10.4, /
25x, "YPOSRRE: ", F10.4,30x, "YPOSLRE: ", F10.4, /)
1711 FORMAT (10x, "NUMBER OF SLIDER BLOCKS ON AIRCRAFT: ", I3///)
1713 FORMAT(46x, "NUMBER OF SLIPPERS ON SEAT: ", I3///)
1713 FORMAT(40x, 10H(PROGRAM A, 10HSSUMES A C, 10HONTINUOUS;
                                                                                                                                                                                                                                                                                                                                                                                                             36X, "COEFFICIENT OF FRICTION(MUSB): ",F12.4,/
33X, "TORSIONAL SPRING CONSTANT(VKTOR): ",F12.4,1X,A2,"-",A2,
                                                                                                                                                           1700 FORMAT(5(/),52x, "RAIL INITIAL CONDITIONS",3(/))
1710 FORMAT(45x, "RAIL LENGTH (RAILNTH ",F12 4,1x,A2,/,
+ 33x, "RAIL ANGLE WRT AIRCRAFT(RAILANG): ",F12 4," DEG",/,
+ 32x,"x-DIRECTION SPRING CONSTANT(KXSB): ",F12.4,1x,A2,"/",+ 32x,"y-DIRECTION SPRING CONSTANT(KYSB): ",F12.4,1x,A2,"/",+ 42./
                                                                                               C FORMAT STATEMENTS FOR RAIL INITIAL CONDITIONS VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15X, "ZPOSSB1: ",F10.4,26X, "ZPOSSB2: ",F10.4,26X, "ZPOSSB3
FTN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C FORMAT STATEMENTS FOR CATAPIL'T PARAMETERS VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + "LOCATION OF SLIDER BLOCK 3 (".A2.")", 10X,

+ "LOCATION OF SLIDER BLOCK 3 (".A2.")", 10X,

+ 21X, "($CS)", 2(36X, "($CS)"), //)

1721 FORMAT(10X, "LOCATION OF SLIPPER 1 (".A2.")", 15X,

+ "LOCATION OF SLIPPER 2 (".A2.")", 15X,

+ "LOCATION OF SLIPPER 2 (".A2.")", 15X,

+ 10CATION OF SLIPPER 3 (".A2.")", //

+ 21X, "($CS)", 2(36X, "($CS)", //)

+ 15X, "XPOSSB1: ", F10.4, 26X, "XPOSSB2: ", F10.4,

+ 15X, "YPOSSB1: ", F10.4, //

+ 15X, "YPOSSB1: ", F10.4, //

+ 15X, "YPOSSB1: ", F10.4, //
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           + 10H"RAIL WITH, 10HIN A RAIL", 1H))
1720 FORMAT(5X, "LOCATION OF SLIDER BLOCK 1 (", A2,")", 10X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1910 FORMAT(/, 10X, "CATAPULT ", 11, ": ", 9X, "LENGHT (CATLNT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + 21X, "(SCS)" 2(36X, "(SCS)"),//)

174! FORMAT(10X, "LOCATION OF SLIPPER 4 (".A2,")",

+ 15X, "LOCATION OF SLIPPER 5 (".A2,")",

+ 10X, "LOCATION OF SLIPPER 6 (".A2,")",/

+ 21X, "(SCS)", 2(36X, "(SCS)"),//)

1750 FORMAT(15X, "XPOSSB4 ", F10.4,26X, "XPOSSB5 ", F10.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1740 FORMAT(5%, "LOCATION OF SLIDER BLOCK 4 (", A2,")",
+ 10%, "LOCATION OF SLIDER BLOCK 5 (", A2,")",
+ 10%, "LOCATION OF SLIDER BLOCK 6 (", A2,")",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26x, "xP0SSB6: ",F10.4/,
15x, "YP0SSB4: ",F10.4,26x, "YP0SSB5: ",F10.4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26X, "YPDSSB6: ",F10.4/,
15X, "2PDSSB4: ",F10.4, 26X, "2PDSSB5: ",F10.4,
26X, "ZPDSSB6: ",F10.4,
   0P f = 1
   74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ./DEG.)
   SUBROUTINE REPRT 1
                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               815
                                                                                                                                                                                                                                                                                                                 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       855
```

```
+ 4X,14X, "RKBETA .", F9 4)
11040 FORMAT(28X, "BURN TIME (RKBURN): ",F9.4," SEC",11X, "2POSRK :",F9.4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C FORMAT STATEMENTS FOR DART PARAMETERS VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (RKWGHT): ",F9.4,1X,A2,12X,"YPOSRK : ",F9.4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11010 FORMAT(5X, "NUMBER OF ROCKETS: ".11//.
+ 104x, "ROCKET THRUST LINE"/,65X, "ROCKET NOZZLE LOCATION (SCS)",
+ 6X, "DIRECTION COSINE ANGLES (SCS)"/,77X,"(",42,")",30X,"(DEG)")
11020 FORMAT(/,10X,"ROCKET ",1X,11,";",6X,"IGNITION (RKIGN): ",
+ F9.4,1X,A2,12X,"XPOSRK: ",F9.4,4X,14X,"RRALPH:",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12000 FORMAT(5(/), 56X, "DART PARAMETERS", 6(/))
12010 FORMAT(48X, "DART FORCE (DRTFRCE): ",F10.4,1X,42./
+ 39X, "DART START DISTANCE (DRTSIDF): ",F10.4,1X,42./
+ 40X, "DART STOP DISTANCE (DRTSIDP): ",F10.4,1X,42.///)
12020 FORMAT(5X, "LEFT DART CONFLUENCE POINT (SCS)",41X, "R1GHT DART -, + "CONFLUENCE POINT (SCS)",19X,"(",A2,")",67X,"(",A2,")"/)
12030 FORMAT(10X, "XDRTCPL: ",F10.4,54X, + "XDRTCPR: ",F10.4, + XDRTCPR: ",F10.4, + XDR
                                                                                                                                                  1930 FORMAT(30X, "TIME OF IGNITION (TCI): ".F9.4," SEC", 24X, "ZPOSAP:", + F9.4 1X)
1935 FORMAT(54X, "TUBE BENDING PARAMETERS"/)
1940 FORMAT (38X, "K TUBE SPRING STIFFNESS CONSTANT (KTUBE): ", + F10.4 1X, A2, "/, A2/, + 70.4 1X, A2, "/, A2/, + 70.4 1X, A2, "/, A2/, + 70.4 1X, A2, "/, SEC/", A2/, + 40X, "EMPIRIZAL TUBE BENDING CONSTANT (FTUBE): ", F10.4/, + 48X, "COEFFICIENT OF FRICTION (MUTUBE): ", F10.4/, + 33X, "RESTORING FORCE STIFFNESS COEFFICIENT (EXTLNGT): ",
                                                               ".F9.4,1X,A2,25X,"YPOSAP:",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   + F10.4 IX.A2.".A2)

+ F10.4 IX.A2.".CATAPULT I THRUST TABLE"//,

+ 52x."IME".20x."THRUST"/.52x."(SEC)".21x."(".A2.")')

1980 FORMAT(47x,F10.4.15x,F10.4)

1985 FORMAT(140,15X,"CATAPULT I THRUST TABLE",T82.

+ "CATAPULT 2 THRUST TABLE"/T15,"TIME".20x.

+ "THRUST" T81."TIME".20x."THRUST"/.T15.

+ "(SEC)".20x."(".A2.")"/)

1980 FORMAT(10x,F10.4,15x,F10.4,177,F10.4,15x,F10.4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C FORMAT STATEMENTS FOR ROCKET PARAMETERS VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11000 FORMAT(5(/),57X, "ROCKET PARAMETERS",4(/))
+ F9.4,1X,A2,25X,"XPOSAP:",F9.4,1X,A2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11030 FORMAT (26X, "FUEL WT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                910
```

```
13000 FORMAT(5(/),51X,"THRUST VECTOR CONTROL DATA"6(/))
13010 FORMAT(48X,"TVC COORDINATE SYSTEM DEFINITION"/
+ 58X,"(WRT SCS)"//,54X,"MPHI: ",F10.4," DEG",/,54X,"MPSI: ",F10.4,
13015 FORMAT(33X,"TVC ROLL CONTROL ROCKET GIMBALLING LIMIT (ROLLR.): ",+ F10.4," DEG"/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14030 FDRMAT(33X,"Y SPRING MODULUS CONSTANT (SY): ",F10 4,1X,A2,"/",A2/)
14035 FORMAT(31X,"Z SPRING MODULUS CONSTANT (SZN1): ",F10 4,1X,A2,"/",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14040 FORMAT (31X, "Z SPRING MODULUS CONSTANT (SZN2). ",F 10 4, 1X, A2, "/",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13030 FORMAT(32X, "TIME DELAY FOR TVC AFTER ROCKET IGNITION (TVCDLAY):
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13020 FORMAT(31X,"TVC PITCH CONTROL ROCKET GIMBALLING LIMIT ",
+ "(PITCHRL): ",F10.4," DEG"/)
13025 FORMAT(41X,"MAXIMUM GYROSCOPE SAMPLING RATE (SMPLRAT): ",F10.4,
+ " DEG/SEC"/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13035 FORMAT(49X, "ROCKET ANGLE WRT SEAT BACK (RKANG): ", F10.4," DEG")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14020 FORMAT (32X, "X SPRING MODULUS CONSTANT (5XP) ", F10.4, 1X, A2, "/".
                                                                                                                                                                                                                                                                                                                                                         C FORMAT STATEMENTS FOR THRUST VECTOR CONTROL DATA VALIDATION REPORT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14025 FORMAT(32X,"X SPRING MODULUS CONSTANT (5XN): ",F10.4,1X,A2,"/".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14050 FDRMAT(33X,"Z DIRECTION DEAD ZONE (ZSLACK). ",F10 4,1X,A2/)
14055 FORMAT(30X,"Z DIRECTION BOTTOMING ZONE (ZBOT). ",F10.4,1X,A2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FORMAT(33X, "X DIRECTION DEAD ZONE (XSLACK): ",F10 4,1X,A2/)
FORMAT(33X, "Z DIRECTION DEAD ZONE (ZSLACK): ",F10 4,1X,A2/)
                      + "ZDRICPR: ",F10.4,///)
12045 FORMAT(1X, "LEFT DART COCKPIT ATTACHMENT POINT (SCS)",31X,
"RIGHT DART COCKPIT ATTACHMENT POINT (SCS)",
+ 19X, "(",A2,")",57X,"(",A2,")",/)
12050 FORMAT(10X, "XDRTAPL: ",F10.4,54X,
+ "XDRTAPR: ",F10.4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15000 FORMAT(5(/), 49x, "DROGUE CHUTE(S) PARAMETERS", 4(/))
15005 FORMAT(25x, "DROGUE TYPE", 33x," (IDROGUE * 1):", 8X,
+ "STANDARD SINGLE DROGUE")
15006 FORMAT(26x, "OROGUE TYPE", 33x," (IDROGUE * 2):", 8x,
+ "VELCON DOUBLE DROGUE")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C FORMAT STATEMENTS FOR DROGUE CHUTE VALIDATION REPORT
                                                                                                                                                                                                    12055 FORMAT ( 10X, "YDRTAPL: ", F 10. 4, 54X,
                                                                                                                                                                                                                                                        12060 FORMAT(10X, "ZDRTAPL: ",F10.4,54X, + "ZDRTAPR: ",F10.4,////)
", F 10.4, 54X,
12040 FURMAT ( 10X, "ZDRTCPL:
                                                                                                                                                                                                                                        + "YDRIAPR: ",F10.4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         + F10.4," SEC"/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         + A2/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   + A2/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14045
                                                                                                                                                                                                            920
                                                            915
                                                                                                                                                                                                                                                                                                                                                               925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        965
```

15010 FORMAT (25x, "DROGUE CONTAINER/SLUG REFERENCE AREA", 13x, "(AREADC) ...

+ F14.4 IX A2)  15015 FORMAT(25X, "DROGUE CONTAINER/SLUG WEIGHT", 21X, "(WGHTDC), F14.4,  15020 FORMAT(25X, "DROGUE CONTAINER/SLUG DRAG COEFFICIENT", 13X, "(CDDC)  + F14.4)  15025 FORMAT(25X, "DROGUE CHUTE DRAG COEFFICIENT", 19X, "(DRDRAG1)  + F14.4)  15035 FORMAT(25X, "DROGUE CHUTE EFFECTIVE POROSITY", 17X, "(POROSD1)  15035 FORMAT(25X, "DROGUE CONTAINER/SLUG RELEASE DELAY, 10X,  + "(TDDPLOY), F14.4, "SEC.)  15040 FORMAT(25X, "SEAT TRAVEL TO DROGUE CONTAINER/SLUG RELEASE  + "(DISPLOY), F14.4, X.A2)  15045 FORMAT(25X, "DROGUE CHUTE LINE LENGTH", 22X, " (DROGLL), F14.4, X.A2)	15050 FORMAT(25X, "DROGUE CHUTE PROJECTED DIAMETER", 17X, "(DROGPD1) :",  + F14.4, 1X, A2)  + F14.4, 1X, A2)  15075 FORMAT(//, 44X, "DROGUE CHUTE ATTACHMENT POINT (SCS)"/, 60X, "(",  + A2,")"/, 50X, "XDROGAP: ", F10.4, 50X, "YDROGAP: ", F10.4,  + /,50X, "ZDROGAP: ", F10.4)  15080 FORMAT(//,38X, "DROGUE CONTAINER/SLUG PROJECTION VELOCITY (SCS)"/,  + 57X, "(",A2,"/SEC)"/,  + 50X, "CROVELX: ",F10.4/,50X, "DROVELY: ",F10.4,	15085 FORMAT(//,44X,"SECOND VELCON DROGUE CHUTE PARAMETERS"//,25X,  + "VELCON CHUIE GRAG COEFFICIENT",16X,"(DRORAG2) :",F14.4/,25X,  + "VELCON CHUIE EFFECTIVE POROSIIY",14X,"(POROSD2) :",F14.4/,25X,  + "VELCON CHUIE PROJECTED DIAMETER",14X,"(OROGPD2) :",F14.4/,25X,  + A2/,25X,"VELCON CHUIE SEPARATION VELOCITY",14X,"(VELCON) :",	+ F14.4.1X.A2."/SEC.") 15500 FORMAT(SE(), 56X, TABLE OF TIMES FROM") 15505 FORMAT(SOX, "DRDGUE CONTAINER/SLUG DEPLOYMENT"/,52X, + "TO DRGGUE CHUTE LINE STRETCH"/,62X,"(DROGLS)") 15510 FORMAT(/,10X,"VELDCITY AT DRGGUE DEPLOYMENT ",89":",8F10.1)	15512 FORMAT(10X, "TIME TO DROQUE LINE STRETCH", 6X,"(SEC):",8f10.4) 15520 FORMAT(53X, "DROGUE CHUIE LINE STRETCH"/,57X,"TO FULL",  + "INFLATION"/,61X,"(DROGGIT)1): 15530 FORMAT(50X,"FIRST DROGUE CHUIE LINE STRETCH"/,57X,  + "TO FULL INFLATION"/,61X,"(DROGFT)1):) 15540 FORMAT(50X,"SECOND DROGUE CHUIE LINE STRETCH"/,57X,  + "TO FULL INFLATION"/,61X,"(DROGFT2):)		FORMAT(40X, TYPE OF CONTROL (IRECOV = 1); FIXED TIME FORMAT(40X, TYPE OF CONTROL (IRECOV = 2); GLIMIT EXTERNAT(40X, "LINE LENGTH", 164, "(RECOVLL); ",F10.4, 1X,A2,/, 40X, "DRAG COEFFICIENT (RECOVPD); ",F10.4, 1X,A2,/, 40X, "PROJECTED DIAMETER (RECOVPD); ",F10.4, 1X,A2,/, 40X, "EFFECTIVE POROSITY (POROSR); ",F10.4,/, 1X,A2,/, 1X,A2,//, 1X,A2,///, 1X,A2,///, 1X,A2,///////////////////////////////////
975	286 066	995	1000	1005	5101	1020

```
205
  PAGE
83/11/07, 09.41 53
                                                                       + 40X, "LDWER ALIITUDE LIMIT (CHALT1): ",F10.4,1X.A2,',
40X, "UPPER ALIITUDE LIMIT (CHALT2) ",F10.4,1X.A2,',
61X, "(*,A2,")"/,
53X, "XRECAP: ",1X,F10.4,',
53X, "YRECAP: ",1X,F10.4,',
63X, "STRETCH",35X, "INFLATION"/,12X,2(20X, "VELOCITY",9X,"TIME"),
64,10 FORMAT(12X,2(20X,FT,1,4X,F10.4))
16500 FORMAT(12X,2(20X,FT,1,4X,F10.4))
16500 FORMAT(12X,2(20X,FT,1,4X,F10.4))
16500 FORMAT(12X,13X,"TABLE OF TIMES FOR RECOVERY",13X,
6500 FORMAT(1,12X,"TABLE OF TIMES FOR RECOVERY",13X,
6500 FORMAT(1,12X,"TABLE OF LIME,16X,"CHUTE LIME STRETCH TO FULL"/,
63X, "STRETCH",31X,"INFLATION"/,3(14X,"VELOCITY",9X,"TIME",
63X, "STRETCH",31X,"INFLATION"/,3(14X,"VELOCITY",9X,"TIME",
16510 FORMAT(3(10X,2(3X,F10.4),3X))
16510 FORMAT(3(10X,2(3X,F10.4),3X))
  FTN 4.6+428
  0PT = 1
74/74
SUBROUTINE REPRT!
                                                                                                                                                                               1030
                                                                                                                                                                                                                                                                                                                              1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1045
```

```
207
       PAGE
       83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONTINUE
XACC(1) = XACCEL(1)/GRAVITY
YACC(1) = YACCEL(1)/GRAVITY
ZACC(1) = ZACCEL(1)/GRAVITY
ZACC(1) = SACCEL(1)/GRAVITY
ZACC(1) = SACCEL(1)/GRAVITY
YACC(1) = YACCEL(1)/GRAVITY
YACCEL(1) = YAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          + TRAJSD(14) , YACC(1) , ZACC(1) , ACCR(1), TRAJSD(16) , VELR(1), TRAJSD(15) , TRAJSD(16) , VELR(1), TRAJSD(16) , TRAJSD(1
FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WRITE(LU,7000) PRTLNGT(PRTINDX), PRTLNGT(PRTINDX)
IF(PRTFRQ,LT,0) GOTO 9900
                                                                                                                                                                                                                                                                                                                    LU-BIAS+2

IF (PRIFRQ LE 0) GO TO 100

IPRICNI(2) = MOD (IPRICNI(2)+1, PRIFRQ)

IF(IEVLINE .NE. 0) GO TO 9900

CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF(LINECT(2) LE. MAXLINE) GO TO 200
CALL HEADER
                                                                                                                                                                                                                                              IF(IEVENTS(28) .NE. 0) GD TO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C WRITE FORMAT STATEMENTS
       0PT = 1
       74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RETURN
       SUBROUTINE REPRT2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
```

COMMON / MISC / IDATE   HEADOR   LU    ***COMMON / MISC / IDATE   HEADOR   LU    ***COMMON / MISC / IDATE   HEADOR   HEADOR    ***COMMON / MISC / IDATE    ***COMMON / REDITYE    ***COM	C SEAT/OCCUPANT ANGULAR TIME HISTORY REPORT	AR TIME HISTORY	REPORT	•	
TREPTS(31)	C CONSTANTS COMMON BLO	JCK	: :		
TREPTS(31)	C SECTION 2 COMMON BL	DCK			
DCMSE(3.3)   DCMRA(3.3)   DCMSA(3.3)   DCMMON BLOCK   DCMA(3.3)   DCMSA(3.3)   DC	C*************************************	/ IREPTS(31)	, PRIFRO, PI1. F	12, P13	•
DCMAE(3.3)   DCMRA(3.3)   DCMSA(3.3)     DCMSE(3.3)   DCMTS(3.3)   DCMSE(3.3)     DCMSE(3.3)   DCMOSE(3.3)   DCMSE(3.3)     DCMSE(3.3)   DCMOSE(3.3)   DCMSE(3.3)     DCMSUM(3.3)     DCMDUM(3.3)     DCMDUM(3.3)     DCMDUM(3.3)     DCMSC(3.3)   LINECT(31)   IPRTCNT(31)     MAXLINE   MAXREDT   MAXEVNT     IEVLINE   HEADALT   HEADVEL     HEADROL   HEADALT   HEADPIT     HEADROL   HEADMAT   HEADPIT     PRIMGHT   PRILNGT   HEADMAT     PRIMGHT   PRIMASS   PRILNGT     TIME   TIME   HEADMAT     TRAJSA(193)   TRAJOA(193)   TRAJOA(193)     TRAJSA(193)   TRESUM   TYPRIX     TYIX   TYIX   TYIX     TYPRIZ   TYPRIX   TRAJOA     TOTITS   TYPRIX   TRAJOA     TOTITS   TYPRIX   TYPRIX     TYPRIX   TYPRIX   TYPRIX     TYPRIX   TYPRIX   TRAJOA     TOTITS   TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX   TYPRIX     TYPRIX     TYPRIX   TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX     TYPRIX	C MATRIX COMMON BLOCK	•	•	:	: .
DCMSAE(3,3), DCMOAE(3,3), DCMSR(3,3), DCMSR(3,3), DCMOUM(3,3), DCMSR(3,3), DCMSR(3,3), DRTCN(3,1), DRTCN(3,1), DRTCN(3,1), DRTCN(3,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(2,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(3,1), DRTCNG(1,3), TRAUSA(1,3,1),	Cartates COMMON /MATRIX	DCMAE(3,3)	DCMRA(3,3)	3.3)	
Image   Imag	++	DCMSAE(3,3), DCMDUM(3,3)	DCMOAE(3,3),	MSR(3,3) .	
I PAGECT(31)   LINECT(31)   I PRTCNT(31)     I MAXELINE	C MISCELLANEDUS DATA C	:	* * * * * * * * * * * * * * * * * * * *	•	:
MAXELINE	CUMMY NUMBER	:=	**************************************	TPRICHT(31)	*
IEVLINE   IERRFLG	+	MAXLINE	MAXREPT	MAXEVNT	•
HEADER   HEADVAL   HEADVEL	•	IEVL INE	, IERRFLG	,	
HEADROL HEADWGT BIAS  REPTYPE (5.31) PRTLNGT PRTWGHT(2)  IHEADER (24) IEVENTS(38) TIMES (38)  IMVDC PRTRMP (2)  PRTMASS(2) PRTINDX PRTEMP (2)  PRTMASS(2) PRTINDX PRTEMP (2)  REPTYPE BIAS PRTLNGT  PRTWGHT PRTMASS PRTINDX  COMMON BLOCK  COMMON BLOCK  TRAUSA (193) TRAUDA (193) TRAUCH (97.3)  TRAUSA (193) TRAUDA (193) TRAUCH (197.3)  TRAUSA (193) TRAUDA (193) TRAUSA (193)  TRAUSA (193) TRAUSA (193) TRA	+ +	1DATE HFADSR	HEADYAN	HEADVEL HEADPIT	
REPTYPE(5.31), PRTLNGT(2), PRTWGHT(2) IHEADER(24), IEVENTS(38), TIMES(38) IMVDC ZVECT(3), XYZ(3), SAVTIME XACCEL(3), YACCEL(3), ZACCEL(3) REPTYPE, BIAS, PRTLNGT PRTWGHT PRTWGHT PRTWGHT PRTMGHT PRTMGHT PRTMGT PRTMGT TRAJAC(193), TVCGQS(225), QUATSQ(65) INTSTP IN	• •	HEADROL	. HEADWGT	BIAS	
	+	S.		, PRTWGHT(2)	
PRTMASS(2) , PRTINDX , PKZVEL ZVECT(3) , YACCEL(3) , SAVTIME XACCEL(3) , YACCEL(3) , ZACCEL(3) REPTYPE	<b>*</b> +	IHEADER(24)	, IEVENTS(38)	30	
ZVECT(3) , XYZ(3) , SAVTIME XACCEL(3) , YACCEL(3) , ZACCEL(3) REPTYGH	•	PRTMASS(2)	. PRTINDX		
XACCEL(3) XACCEL(3) XACCEL(3) XACCEL(3) REPTYPE , BIAS , PRILNGT PRIVAGH PRIVAGH PRIVAGH PRIVAGH PRINGS , PRILNGT COMMON BLOCK  COMMON BLOCK TAMES DELIAT TRAJSA(193) TRAJSA TYX TYX TYX TYX TYX TYX TYX TYX TYX TYTX TY	+	ZVECT(3)		SAVTIME	·
PRIMATE PRIMASS PRIMAS	\$ i	XACCEL(3)	. YACCEL(3)		
PRTEMP PRTMASS PRIINDX COMMON BLOCK TIME TIMES DELTAT TRAJCH(93) TRAJCH(93) TRAJCH(97,3) TREACH(97,3) TREACH(	10   CGE K	PRIWGHT	۲ <b>۷</b> 10	, FK LNG	
COMMON BLDCK  TAUSA (193) TRAJOA (193) TRAJOH (97.3) TRAJOA (193) TRAJ	*		PRIMASS	, PRTINDX	:
TIME		COMMON BLOCK			
TRAJSA(193)   TRAJOA(193)   TRAJCH(97)     TRAJAC(193)   TVCEQS(225)   QUATSO(65)     OUATSA(65)   QUATSA(65)     INTSTP		/ TIME _ TIMES	*		•
TRAJAC(193) . TVCEQS(225) . QUATOA(65) . QUATOA(65) . QUATOA(65) . INCASS . INCAS . INC	+	¥	. TRAJOA( 193)	. TRAJCH(97.3) .	
QUATSA(65) , QUATOA(65) , QUATAC( INTSTP	*	TRAJAC( 193)	. TVCEQS(225)	, QUATSO(65)	
INDINTS INCPASS INCOME IVIX IVIX IVIX IVIX IVIX IVIX IVIX IVERIX INPRIX IVERIX INPRIX ICVIX INTIX	•	QUATSA(65)	, QUATOA(65)	, QUATAC(65)	
IKX IKSUMX IVIX IVIX IVIX IVIX IVI3X IVPRIX IVPRIZX IPVIX ICVIX ICVIX	+ •	INISTR	745	, IRKPASS	
YIX	• •		IKSUMX	IKPASSX	
IVI3X IVPRIX IVPRIX IVPRIX ICVIX ICVIX ICVIX	•	IVIX	IYI 1X	IY12X	
IYPRIZX . IPYIX ICYIX ICYIX	•	1 V 1 3 X	. IYPRIX	. IYPRI 1X	
	+ 4	1YPR12X	. IPYIX	. IPYIIX	
	******************	*********	*****	**********	

```
209
     PAGE
     83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONTROLL ('. BX." TIME", 17X, "ACCELERATION (SCS)", 24X, "RATE (EFCS)", 4X, "CONTROLL (BX, "CONTROLL", BX, "PITCH", BX, "PITCH", BX, "PITCH", BX, "RES", BX, "ROLL", BX, "ROLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FPOLL(1) = ZARCTAN(DCMSE(2,3), DCMSE(3,3)) * RADDEG
FPOLL(1) = -ASIN( DCMSE(1,2), DCMSE(1,1)) * RADDEG
FYAW(1) = ZARCTAN(DCMSE(1,2), DCMSE(1,1)) * RADDEG
FYAW(1) = ZARCTAN(DCMSE(1,2), DCMSE(1,1)) * RADDEG
OACC = TRAJSO(23) * RADDEG
OACC = TRAJSO(25) * RADDEG
RACC = TRAJSO(25) * RADDEG
OVL(1) = TRAJSO(11) * RADDEG
OVL(1) = TRAJSO(12) * RADDEG
RESULT: * SORT(PACC*PACC + OACC*OACC + RACC*RACC)
RESULT: * SORT(PVL(1)*PVL(1)*OVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)*PVL(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULTI.
RESULT2.
RESULT3
                                                                                                                                                                         VELR(3)
RPOS(3)
RLACR(3)
RLVLR(3)
RLPSR(3)
4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OACC RACC OVL(1) . RVL(1) . FPITCH(1) . FYAW(1)
                                                                                                                                                              PVL(3) , QVL(3) , RVL(3)
FROLL(3) , FPITCH(3), FYAW(3)
FRACC(3) , RYACC(3) , RZACC(3)
FRYPOS(3) , RYVEL(3) , RZVEL(3)
FRYPOS(3) , RYVEL(3) , RZVEL(3)
FRYPOS(3) , RYVEL(3) , RZPOS(3)
FRYPOS(3) , RQPOS(3) , RRVEL(3)
FRYPOS(3) , RQPOS(3) , RRVOS(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LUBIAS+3

LUBIAS+3

IF (PRIFRQ LE. 0) GD TO 100

IFFICITION NE. 0) GD TO 100

IFFICITINE NE. 0) GD TO 9900

IFFICITION NE. 0) GD TO 9900

OO CONTINUE

IFFICITION LE. MAXLINE) GD TO 200

CALL HEADER

WRITE (LU,7000)

IFFICITION LT. 0) GDTO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + FROLL(1)
LINECT(3) * LINECT(3) + 1
9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PACC
     0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WRITE(LU.7010) TIME
     74/74
     SUBROUTINE REPRIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05
```

COMMON / MISC COMMON BLOCK COMMON / RAUTHA COMMON BLOCK COMMON RAUTHA COMMON BLOC	-	ALONE LINEAD TIME				
NEGER	C CONSTANTS C CONSTANTS	COMMON BLOCK	HISTORY RE	PORT	14	
COMMON / IREPTS(31)   PRTFRO, P11, P12, P13	C SECTION	2 COMMON BLOCK	•	•		
NISCELLANEOUS DATA COMMON BLOCK	COMMO	N /IREPORT / IREPTS	. ~ -	PRIFRO, PI1, P	•	
### COMMON / MISC	:	:		•	:	:
COMMON /MISC / IPAGECT(31) , LINECT(31)   IPRTONT(31)  + HEADER   HEADER   HEADER   HEADER    + HEADER   HEADER    + HEADER   HEADER    + HEADER   HEADER    + KACEL   HEADER   HEADER    + KACEL   HEADER   HEADER    + KACEL   HEADER   HEADER    + KACEL   HEADER   HEADER    + HEADER   HEADER    + KACEL   HEADER   HEADER    + HEADER   HEADER    + KACEL   HEADER   HEADER    + HEADER   HEADER    - KACEL   HEADER   HEADER    - KACEL   HEADER    - HEADER   HEADER    - HEADER   HEADER    - HEADER   HEADER    - KACEL   HEADER    - HEADER   HEADER    - HEADER   HEADER    - HEADER   HEADER    - HEADER	C MISCELLAN	JEOUS DATA COMMON BL				
TERRE   HEADLE   HEADLE   HEADLE	OMMOD	N /MISC / IPAGEC	:	LINECT(31)	. IPRTCNT(	•
TEVLINE   TEVERFEG	•			MAXREPT	, MAXEVNI	•
HEADER   H	•	IEVL IN	Z	1ERRFLG	01 ·	•
HEADROL   HEADWGT   BIAS	• •	IDATE HEADSR	Or .	HEADYAW	HEADPIT	-
HEADER(24)   IEVENTS(38)   TIMES(38)	•	HEADRO		HEADWGT	BIAS	• •
HEADER(24)   IEVENTS(38)   TIMES(38)	•	REPTYP	Š,	PRTLNGT(2)	. PRTWGHT(2)	•
TAULO	+ •	IHEADE	ER(24) .	IEVENTS (38)	∞ '	•
NIEGER   REFTYPE   BIAS   SAVTIME	+ +	OWING	(6)33	IMVDC		•
INTEGER	٠ ٠	ZVECT	(3)(5)	x x 2 (3)	SAVIIME	•
INTEGER   REPTYPE   BIAS   PRTLNGT	• •	XACCEL	. (3) 	YACCEL(3)	(2)	•
PRINGLY   PRIMASS   PRIINDX	INTEG			BIAS	. PRTLNGT	•
INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME, TIMES, DELTAT  + TAJAC(193)   TRAJCH(97,3)   TRAJAC(193)   TRAJCH(97,3)   T	+ •	PRIMOH	· <del>-</del> 0	DDTMASS	X UNI I OO	
INTEGRATION ROUTINE COMMON BLOCK   TIMES   DELTAT   TRAJOG(193)   TRAJ		****			***********	•
COMMON /RKUTTA / TIME . TIMES DELTAT . TRAJSG(193) . TRAJCH(97.3) . TRAJCH(93) . TRAJG(193) . TRAJGH(193) . TRAJCH(97.3) . TRAJGH(193) . TRAJGH(193) . TRAJCH(97.3) . TRAJGH(193) . TRAJGH(193) . TRAJGH(193) . TRAJCH(193) . TRAJ		ON ROUTINE COMMON B	вгоск		•	•
TRAJOR(193)   TRAJOR(193)   TRAJOR(197, TRAJOR(193)   TVCEQS(225)   QUATSO(65)		N /OKUTTA / TIME	TIMES		•	
TRAJAC(193)   TVCEQS(225)   TUCEQS(225)	+	•	193)	TRAJOA(193)	TRAJCH(97.3)	
Holnstp   Incapass	•	TRAJAC	. (193)	TVCEQS(225)	. QUATSO(65)	
HOINTS   HOPASS   HOPASS   HOINTS   HOPASS   HOINTS   HOW	•	QUATSA	4(65)	QUATOA(65)	. OUATAC(65)	
	+ +	TAICOL		IPCPASS	I KKPASS	
1	• •	XXI	•	1. V	TKDACCX	
+ IV13X IVPRIX I IPPRIX I IPPRIX I IPPRIX I IPPRIX I IPPRIX I IPVIX I	• •	XIXI	- •	IVIIX	IVIZX	
TYPRIZX   TYPTIX	+	XIII	•	IYPRIX	IYPRIIX	
CYIX	+	IVPRIZ	. ×2	IPYIX	. IPYI1X	
PLOT FILE VARIABLES COMMON BLOCK  COMMON /PLOT / XACC(3) . YACC(3) .  + PVL(3) . QVL(3) . RVL(3) .  + FROLL(3) . FPITCH(3) . FYAW(3) .  - RXACC(3) . RYACC(3) . RZACC(3) .  - RXVEL(3) . RYDEL(3) . RZECL(3) .  - RXVEL(3) . RYDEL(3) . RXVEL(3) .	+	ICYIX	•	:		
. ZACC(3) . RVI (3) 3). FYAW(3) ). RZACC(3) ). RZVEL(3) ). RZPOS(3)	C PLOT FILE	VARIABLES COMMON B	3LOCK		;	
PVL(3) . QVL(3) . RVL(3) . FROLL(3) . FPITCH(3) . FYAW(3) . RXACC(3) . RZACC(3) . RXVEL(3) . RZVEL(3) . RXVEL(3) . RXVEL(	COMMOD	N /PLOT / XACC(3)	YACC(3	ZACC(3	ACCR(3	
FPIICH(3), FYAW(3), RAACC(3), RAACC(3), RZVEL(3), RZVEL(3), RZVEL(3), RZPOS(3), RZPOS(4)	+		•		. VELR(3)	
RYACC(3)	•	FROLL(3)		3)	, RPOS(3)	
) . MYVEL(3) , MZVEL(3) , MLVLM ) . RYPOS(3) , RZPOS(3) , RLPSR ) . BOVEL(3) , BOVEL(3)	•	RXACC(3)	•	•	, RLACR(3) ,	
00/41(3)	• •	MAVEL(3)		•	DIDCE(3)	
	•		•			

```
2 -
   PAGE
   09 41 53
   83/11/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LU-BIAS + 4

IF (PRIFRO .LT. 0) GD TD 100

IF (IEVENTS(2B) .EQ. 0) GDTD 9900

IF (PRIFRO .LT. 0) GD TD 100

IF (PRIFRO . GD TD 100

IF (IEVLINE .NE. 0) GD TD 100

IF (IEVLINE .NE. 0) GD TD 100

IF (IPRTCNT(4) .NE. 0) GD TD 9900

IF (IPRTCNT(4) .NE. 0) GD TD 9900

IF (IPRTCNT(4) .NE. 0) GD TD 9900

IF (IPRTCNT (4) .NE. 0) GD TD 9900

IF (IPRTCNT (4) .NE. 0) GD TD 9900

CALL HEADER
WRITE(LU, 7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)

IF (PRTFRO .LT. 0) GDTD 9900

200 CONTINUE

XACC(2) = XACCEL(2)/GRAVITY

YACC(2) = YACCEL(2)/GRAVITY

YACC(2) = YACCEL(2)/GRAVITY

ACCR(2) = SORT(TRAUDA(14) +TRAUDA(15) +TRAUDA(15) +

TRAUDA(14) -TRAUDA(16))

RPDS(2) = SORT(TRAUDA(16))

RPDS(2) = SORT(TRAUDA(16))

RPDS(2) = SORT(TRAUDA(16))

RPDS(2) = SORT(TRAUDA(16))

RPITE(LU, 7010) TIME

WRITE(LU, 7010) TIME

WRITE(LU, 7010) TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACC(2) , YACC(2) , ZACC(2) , ACCR(2), TRAJOA(16), VELR(2), + TRAJOA(14), TRAJOA(15), TRAJOA(16), VELR(2), + TRAJOA(2), TRAJOA(3), TRAJOA(4), RPDS(2) CONTINUE
 FIN 4 6+428
   0PT = 1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RE TURN
   SUBROUTINE REPRIA
                                                                                                                                                                                                                                                                                                        -
88
                                                                                                                                                                                                        8
                                                                                                    9
                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
```

C SEAT ALONE LINEAR TIME HISTORY REPORT	HISTORY REPOR	_	•
C CONSTANTS COMMON BLOCK			
COMMON / CONSINT / GRAVITY . KADDEG . DEGRAD . P.1  C. SECTION 2 COMMON BLOCK  C. SECTION 2 COMMON BLOCK  C. SECTION / PEPDOR / IREPTS(31) . PRIFOR PL1 PL2 PL3	/ GKAVIIY . KA 	RAIDEG DEGRAU ************************************	AU
	PRIFRO, P11, P12		
COMMON /MATRIX /		CMRA(3,3) , D CMTS(3,3) , D CMOAE(3,3), D	DCMSA(3,3), DCMTE(3,3), DCMSR(3,3),
COMMON /MISC / IPAGECT(31)  + HONDON /MISC / IPAGECT(31)  + HONDON /MISC / IPAGECT(31)  + HONDON /MISC / IPAGECT / 110  - HONDON /MISC / IPAGECT / IPAGECT / 110  - HONDON / IPAGECT / I	:	LINECT(31) MAXREPT IERRFLG HEADAL	IPRICNI(31) MAXEVNI LU HADVEL HEADVI
****	HEADROL REPTYPE(5,31) IHEADER(24) PRIMASS(2)	. HEADWGT . PRTLNGT(2) . IEVENTS(38) IMVDC . PRTINDX	, BIAS , PRIWGHT(2) , TIMES(38) , PRIEMP(2) , PKZVEL
INTEGER   INTEGER   C	ZVECT(3) XACCEL(3) REPTYPE PRIWGHT PRIEMP COMMON BLOCK	XYZ(3) YACCEL(3) BIAS PRIMASS	SAVTIME ZACCEL(3) PRTLNGT PRTINDX
COMMON / PRUITA /	TIME TIMES. TRAUSA(193) TRAUSA(193) QUATSA(65) INTSTP	DELTAT TRAJOA(193) TVCEOS(225) QUATOA(65) IPCPASS	TRAUSO (193) TRAUCH(97.3) QUATSO (65) QUATRO (65) TRKPASS
+ 1KX + 1Y1X + 1Y13X + 1YPR12X + 1CY1X C************************************	IKX IYIX IYI3X IYPRI2X ICYIX	1KSUMX 1Y11X 1YPR1X 1PP1X 1CY11X	IKPASSX 1712X 1712X 17711X 17711X 17711X

```
213
   PAGE
   53
   83/11/07. 09.41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             XACC(3) = XACCEL(3)/GRAVITY
YACC(3) = YACCEL(3)/GRAVITY
ZACC(3) = ZACCEL(3)/GRAVITY
ZACC(3) = SACCEL(3)/GRAVITY
YACC(3) = SACCEL(3)/GRAVITY
YACC(3) = YACCEL(3)/GRAVITY
YACC(3) = YACCEL(3)/GRAVITY
YACC(3) = YACCEL(3)/GRAVITY
YELR(3) = SORT(TRAJSA(4)*TRAJSA(14)*TRAJSA(15)*TRAJSA(15) +
TRAJSA(14)*TRAJSA(16)
+ TRAJSA(4)*TRAJSA(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . ACCR(3).
. VELR(3).
. RPOS(3)
                                                                                                 VELR(3)
RPOS(3)
RLACR(3)
RLVLR(3)
RLVLR(3)
   FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZACC(3)
TRAUSA(16)
TRAUSA(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IF(INECT(S) LE. MAXLINE) GO TO 200
CALL HEADER
WRITE(LU,7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
IF(PRTFRO LT. 0) GOTO 9900
CDNTINUE
                                                                                                       XACC(3) YACC(3) . 1 + TRAJSA(14) . TRAJSA(15) . T + TRAJSA(14) . TRAJSA(15) . T + TRAJSA(15) . TRAJSA(15) . T + TRAJSA(15) . 
                                                                                                                                                                                                                                                                                                                                    LU = B1AS + 5

1F (IEVENTS(31) NE. O) GO TO 9900

1F (PRIFRO LT. O) GO TO 9900

1F (FEVENTS(28) .EQ. O) GOTO 9900

1F (PRIFRO .EQ. O) GOTO 100

1F (PRIFRO .EQ. O) GOTO 100

1F (IEVLINE .NE. O) GO TO 100

1F (IEVLINE .NE. O) GO TO 9900

20 CONTINUE
                                                                                                          PVL(3)
FROLL(3)
RXACC(3)
RXVEL(3)
RXPOS(3)
RPVEL(2)
            0P1=1
            14/14
         SUBROUTINE REPRIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                        ၀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

5-214

PAGE

กร	SUBRUUTINE REPRIE	60			
• • • • •	•	•	C	• • • • • • • • • • • • • • • • • • • •	
C SEAT A	SEAT ALONE ANGULAR TIME HISTORY REPORT	IME HISTORY REI	PORI	•	
C	Content to Company Brock	•	• • • • • • • • • • • • • • • • • • • •	Controvers the contro	: '
		•	• • • • • • • • • • • • • • • • • • • •		•
00	COMMON /CONSTNT / GRAVITY	GRAVITY .	RADDEG , DEGRAD	AD PI	
C SECTIO	C SECTION 2 COMMON BLOCK	JCK		C SECTION 2 COMMON BLOCK	•
C*****	**********	• • • • • • • • • • • • • • • • • • • •	******		• • • •
0 N	COMMON / IREPORT / IREPTS(31) INTEGER PRIFRO, PI1	/ IREPTS(31) . PR PRIFRO.P11.P12.P13	, PRTFRO,PI1,P12,PI3 12,PI3	12,PI3	
C MATRIX	C MATRIX COMMON BLOCK	• • • • • • • • • • • • • • • • • • • •	C MATRIX COMMON BLOCK		:
Cossess	4		:	***************	:
00 +	COMMON /MATRIX /	/ DCMAE(3,3) . DCMSE(3,3) .	DCMRA(3,3) , DCI DCMTS(3,3) , DCI	DCMSA(3,3) , DCMTE(3,3) ,	
* *		DCMSAE(3,3), DCMDUM(3,3)	DCMSAE(3.3), DCMOAE(3.3), DCMSR(3.3) DCMDUM(3.3)	MSR(3,3) ,	
C MISCEL	C MISCELLANEOUS DATA COMMON BLOCK	OMMON BLOCK	\$ 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		• • •
			****		
<del>0</del>	COMMON /MISC	/ IPAGECT(31)	LINECT(31)	MAXEVNI	•
• •		I E VL I NE	IERRFLG	1.0	
+		IDATE	HEADALT	, HEADVEL	
+		HEADSR	, HEADYAW	, HEADPIT	
+		HELDROL	-	BIAS	
+		REPTYPE(5,31)	•	. PRIWGHI(2)	
٠ .		IHE ADER (24)	. IEVENIS(38)	DDIEMP(38)	
. +		PRIMASS(2)	PRIINOX	PKZVFL	
+		ZVECT(3)	, XYZ(3)	SAVTIME	
+		XACCEL(3)	YACCEL(3)	ZACCEL(3)	
Z	INTEGER	REPTYPE	BIAS	PRTLNGT	
+ +		PRIWGHI		VON 1 100	
C STATECO	ANTECOATION DOLLTME COMMON BLOCK	COMMON BLOCK	* * * * * * * * * * * * * * * * * * * *		: •
	INTEGRALION ACCIONE COMMON DECEN	***********	• • • • • • • • • • • • • • • • • • • •	••••••	•
00	COMMON /RKUTTA /	/ TIME , TIMES	Ξ.	, TRAJSD(193) ,	
+		TRAUSA(193)	, TRAJOA(193)	, TRAJCH(97,3)	
•		1RAJAC(193)	1VCE0S(225)	. 00A1SU(65)	
+ +		OUATSA(65)	OUATUA(65)	OUALAC(65)	
٠ •		TOTAL	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TADAY.	
• •		ik x x x	IKCIINX	KPASS	
•		IVIX	IVIIX	1V12X	
+		1 Y 1 3 X	. IYPRIX	IYPRIIX .	
•		IYPR12X	IPYIX	. IPYIIX	
+		ICYIX	. ICY11X	IREIN	
	Consequence of the consequence o	**************************************	:	• • • • • • • • • • • • • • • • • • • •	
	, 21:25	こうりょう こうきをつく			

```
PAGE
   83/11/07, 09,41,53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cottons control to the control to th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , RESULT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . RESULTZ.
                                                                                               VELR(3)
RPOS(3)
RLACR(3)
RLVLR(3)
RLPSR(3)
   FIN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       + PACC , GACC , RACC
+ PVL(3) , GVL(3) , RVL(3)
+ FRGL(3) , FPITCH(3) , FYAW(3)
CONTINIE
                                                                                               RVL(3)
FYAW(3)
RZACC(3)
RZVEL(3)
RZPOS(3)
RRVEL(2)
RRPOS(2)
                                                                                                                                                                                                                                                                                                                                       LU = B1AS + 6

IF (IEVENTS(31) .NE. 0) GO TO 9900

IF (PRTFRQ .LT. 0) GO TO 100

IF (FRTFRQ .EQ. 0) GOTO 9900

IF (PRTFRQ .EQ. 0) GOTO 100

IPPTCNT(6) = MOD (IPPTCNT(6)+1, PRTFRQ)

IF (IEVLINE .NE. 0) GO TO 100

IF (IPRTCNT(6) .NE. 0) GO TO 9900
                                                                                               PVL(3) , CVL(3) , RV
FROLL(3) , FPITCH(3), FV
RXACC(3) , RYACC(3) , R2
RXVEL(3) , RVPCE(3) , R2
RXPOS(3) , RYPOS(3) , RS
RPVEL(2) , ROVEL(2) , RF
RPDOS(2) , RQPOS(2) , RF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF(LINECT(8) .LE. MAXLINE) GD TO 200 CALL HEADER WRITE(LU,7000)
IF(PRIFRQ .LT. 0) G0TO 9900
      0PT = 1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25
   SUBROUTINE REPRIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        105
```

17	C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C COMMON / CONSTNT / GR C SECTION 2 COMMON BLOCK C SECTION / IREFORT / IR INTEGER C MISCELLANGUS DATA COMMON C MISCELANGUS DATA COMMON C MISCELLANGUS DATA COMMON C MISCELLANGUS DATA COMMON C MISCELANGUS	AVITY , RADI EPTS(31) , TFRO. PI1. PI2. I BLOCK AGECT(31) , VLINE AL	DEG , DEGR PRTFRQ, P11, P P13 MAXKEPT LINECT(31) MAXKEPT HEADALT HEADA	4D PI 12, PI3 12, PI3 12, PI3 MAXEVNT LU HEADVEL HEADPIT BIAS PRTEMP(2) PRTEMP(2) PRZVEL SAVTIME SAVTIME
PRTFRQ, PI1, PI2, PI3	C CONSTANTS COMMON BLOCK C COMMON / CONSTANT / GR C SECTION 2 COMMON BLOCK C SECTION 2 COMMON C	AVITY , RADI EPTS(31) , FFRO, PI1, PI2, I M BLOCK AGECT(31) , ALINE ,	DEG DEGR DEGR DEGR DEGR DEGR DEGR DEGR D	AD PI  12, PI3  12, PI3  IPRTCNT(31)  MAXEVNT  LU  HEADVEL  HEADPIT  BIAS  PRTWGHT(2)  TIMES(38)  PRZVEL  SAVTIME  SAVTIME
PRIFRQ, PI1, PI2, PI3	C SECTION 2 COMMON BLOCK  C SECTION 2 COMMON BLOCK  COMMON / REFORT / IN  INTEGER  C MISCELLANEOUS DATA COMMON  C MISCELLANEOUS DATA COMMON  C MISCELLANEOUS AND MA  H H H H H H H H H H H H H H H H H H H	AVITY , RADI EPTS(31) , . TFRO, PI1, PI2, I NELOCK AGECT(31) , KLINE AUINE AUSR ADSR ADSR ADSR ADSR ADSR (24) , EADER(24) , EADER(24) , EADER(24) , EGER(24) , EGER(24) , EGER(24) , EGER(23) , EGER(2	PEG , DEGR. PRTFRQ, PI1, PP PI3 LINECT(31) MAXREPT LERFLG HEADALT HEADWGT HEADWGT PRTLNGT(2) IEVENTS(38) IMVDC XYZ(3)	12, P13 12, P13 12, P13 14 MAXEVNT 15 HEADVEL 16 HEADP17 16 MAS 17 MES (38) 17
PRTFRQ, PI1, PI2, PI3  PI2, PI3  PI2, PI3  PI2, PI3  LINECT(31) IPRTCNT(31)  MARREPT MAXEVNT  ERREPT HEADVEL  HEADVAT HEADVEL  HEADVAT BIAS  INVDC PRTMAT(2)  PRTMAT(2) PRTWGHT(2)  IRVDC PRTMDX PRZVEL  XYZCEL(3) PRTMCH(2)  PRTMAC(3) PRTLNDX  INCEQS(225) QUATSO(65)  QUATDA(65) QUATSO(65)  OUATDA(65) QUATSO(65)  OUATDA(65) QUATSO(65)  INCEQS(225) QUATSO(65)  OUATDA(65) QUATSO(65)  INCEQS(225) QUATSO(65)  INCEQS(225) QUATSO(65)  INCEQS(225) QUATSO(65)  INCEQS(225) QUATSO(65)  INCEQS(225) QUATSO(63)  INCEQS(23) REVER(3)  YACC(3) REVER(3)	C SECTION 2 COMMON BLOCK COMMON / IREPORT / IR INTEGER C MISCELLANEOUS DATA COMMON C MISCELLANEOUS MA C MISCELLANEOUS DATA COMMON C MISCELLANEOUS MA C	EPTS(31)  FFRO, PI1, PI2, OR BLOCK  M BLOCK  AGECT(31)  KLINE  ATTE  ADSR  ADS	PRTFRQ.P11.P P13 MAXRED LINECT(31) MAXREPT IERFLG HEADALT HEADALT HEADWGT PRTLNGT(2) IEVENTS(38) IRVDC NAVOC NAVOC	12, P13 1PRTCNT(31) MAXEVNT LU HEADVEL HEADPIT BIAS PRTEMP(2) TIMES(38) PRZVEL SAVTIME SAVTIME
PIZ.PI3  PRTFRQ, PII, PIZ, PI3  PIZ.PI3  MAXREPT  MAXREPT  MAXEVNT  IERFLG  LU  HEADALT  HEADWGT  HEADWGT  IEVENTS(38)  INVDC  PRTWGHT(2)  IEVENTS(38)  INVDC  PRTWGHT(2)  PRTWGHT(2)  INVDC  PRTWGHT(2)  PRTWGHT(2)  PRTWGHT(2)  PRTLNGT  PRTUNGT  PRTUNGT  PRTUNGT  PRTUNGT  PRTUNGT  PRTUNGT  PRTUNGT  PRTUNGT  INVDC  PRTUNGT  PRTUNGT  INVDC  PRTUNGT  INVDC  PRTUNGT  INVDC  INVC(3)  INVC(3)  INCC(3)  INCC(4)  INCC(	COMMON / REFORT / IR COMMON / REFORT / IR COMMON / MISC CANACTOR / IP COMMON / MISC HE HE HE HE HE HE HE HE HE HE	EPTS(31)  FFRO, PIL, PIZ,  M BLOCK  AGECT(31)  KLINE  VINE  ADSR	PRTFRQ, PI1, PP13 PP13 LINECT(31) MARREPT LERFLG HEADALT HEADWGT HEADWGT PRTLNGT(2) IEVENTS(38) IMVDC XYZ(3)	12, P13  IPRTCNT(31)  MAXEVNT  LU  HEADPIT  B1AS  PRTWGHT(2)  TIMES(38)  PRTEMP(2)  PRTEMP(2)  PREMP(2)  PREMP(2)  PREMP(2)  PREMP(2)
PIE, PIE	C.************************************	FFRO PLI PIE.  FFRO PLI PIE.  M BLOCK  ACECT (31)  KLINE  VINE  ADSR  AD	PITS PITS	IPRTCNT (31)  MAXEVNT  LU  HEADPIT  BIAS  PRTWGHT (2)  TIMES (38)  PRTEMP (2)  PRTEMP (2)  PRTEMP (2)  PRTEMP (2)  PRTEMP (2)  PRTEMP (2)
LINECT(31)   IPRTCNT(31)   MARREPT   MAXEVNT   MARREPT   LU   MAXEVNT   LERREG   LU   HEADVEL   HARVEL	C.************************************	M BLOCK AGECT(31) KLINE VLINE ALE ADSR ADSR ADROL PTYRE(5,31) EADER(24) TMASS(2) ECT(3)	LINECT(31) MAXREPT IERRELG HEADALT HEADALT HEADWGT PRILNGT(2) IEVENTS(38) IMVDC NRTINDX XYZ(3)	IPRTCNT(31) MAXEVNT LU HEADVEL HEADPIT BIAS PRTWGHT(2) TIMES(38) PRZVEL SAVTIME SAVTIME
LINECT(31)	C*************************************	*	********* MINECT(31) MERRETE HEADALT HEADVAW HEADVAW HEADVAW HEADVAW TEVENTS(38) INVDC XYZ(3)	IPRTCNT(31) MAXEVNT LU LU HEADVEL HEADPIT BIAS PRTWGHT(2) TIMES(38) PRTEMP(2) PRZVEL SAVTIME SAVTIME
HEADALT		AGE (131)  KLINE  ATE  ADSR  ADSR  PTYPE(5,31)  FMASS(2)  FMASS(2)	LINEELISI) MAXRET IERRIG HEADALT HEADWAT HEADWGT PRTLNGT(2) IEVENTS(38) IMVDC XYZ(3)	MAXEVNI LU HEADVEL HEADPIT BIAS PRTWGHT(2) TIMES(38) PRTEMP(2) PRZVEL SAVTIME
HEADALT		ATE ADSR ADSR ADRE(5,31) EADER(24) TMASS(2)	HEADALT HEADALT HEADYAW HEADWGT PRTINGT(2) IRVEC PRTINDX XYZ(3)	HEADVEL HEADVIT HEADVIT HEADVIT HEADVIT HEADVIT HEADVIT HEADVEL SAVIME SAVIME
HEADNET   HEADNEL   HEADNEL   HEADNEM   HEADNET   HEAD		ATE ADSR ADRE(5,31) PTYPE(5,31) EADER(24) TMASS(2)	HEADALT HEADVAW HEADWGT PRTINGT(2) IEVENTS(38) IMVDC PRTINDX XYZ(3)	HEADVEL HEADPIT BIAS PRINGHT(2) TIMES(38) PRTEMP( 2) PRZVEL SAVIIME
HEADVAW HEADPIT HEADWGT BIAS  JI PETLNGT(2) PRTWGH(2) IMVDC PRTYVEL PRTINDX PRZVEL YACEL(3) SAVTIME YACEL(3) PRTEMP (2) BIAS PRTINDX  PRTMASS PRTINDX  FE DELTAT TRAJSO (193) TVCEQS(225) QUATAC(65) OUATOA(193) TRAPASS TYCEQS(225) QUATAC(65) TYCEQS(225) QUATAC(63) TYCEQS(23) TREPRIX TYCEQS(23) TRE		ADSR ADROL PTYPE(5,31); EADER(24); TMASS(2)	HEADVAW HEADWGT PRTLNGT(2) IEVENTS(38) IMVDC PRTINDX XYZ(3)	HEADPIT BIAS PRIWGHT(2) TIMES(38) PRTEMP(2) PKZVEL SAVIIME
HEADWGT BIAS  31) PRTLNGT(2) PRTWGHT(2)  INVOC PRTEMP 2)  PRTINDX PRZCEL(3)  PRZCEL(3) ZACCEL(3)  BIAS PRTLNGT  PRTMASS PRTLNGT  PRAJDA (193) PRTLNGT  PRAJDA (193) PRTLNGT  PRAJDA (193) PRTLNGT  PRAJDA (193) PRTLNGT  INPRIX INPRX INPX INPX INPX INPX INPX INPX INPX INP		ADROL PTYPE(5,31); EADER(24); TMASS(2); ECT(3)	HEADWGT PRTLNGT(2) IEVENTS(38) IMVDC PRTINDX XYZ(3)	BIAS PRTWGHT(2) TIMES(38) PRTEMP(2) PKZVEL SAVTIME
31) PRTLNGT(2) PRTWGHT(2)  1 IEVENTS(38) TIMES(38)  1 PRTINDX PRTEMP(2)  1 PRTINDX PAYZ(3) SAVIIME  2 YACCEL(3) PRTLNGT  2 PRTINDX  1 PRAJA(193) PRTLNGT  1 TRAJA(193) PRTLNGT  1 TRAJA(193) PRTLNGT  1 TRAJA(193) PRAJCH(97,3)  1 TVCCOS(225) OUATSO(65)  1 TVCCOS(225) PRTINDX  1 TVCCOS(225) PRTINDX  1 TVCCOS(225) PRAJCH(97,3)  1 TVT IX INPRX  1 TVT IX IX INTRX  1 TVT IX		PTYPE(5,31) , EADER(24) , TMASS(2) .	PRTLNGT(2) IEVENTS(38) IMVDC PRTINDX XYZ(3)	PRTWGHT(2) TIMES(38) PRTEMP(2) PRZVEL SAVIIME
) IEVENTS(38) TIMES(38)  INVDC PRTEMP(2)  XYZ(3) SAVTIME  YACCEL(3) ZACCEL(3)  BIAS PRTLNGT	· · · · · · · ·	EADER(24) . TMASS(2) .	IEVENTS(38) IMVDC PRTINDX XYZ(3)	
IMVDC		TMASS(2)	IMVDC PRTINDX XYZ(3)	
PRIMOX   PRIVEL		ECT(3)	YK11NDX XY2(3)	SAVTIME
**************************************		ECT(3)	A72(3)	SAVITME
PRIMASS   PRTINDX   PRIMASS   PRTINDX   PRIMASS   PRTINDX   PRIMASS   PRTINDX   PRIMASS   PRTINDX   PRAJOR(193)   PROS(193)   PROS			VACCE (2)	787.7.61
PRTMASS		PTYPE	RIAS	PRTLNGT
PRTMASS		TWGHT		
FE		TEMP .	PRIMASS	, PRTINDX
		ON BLOCK		• • • • • • • • • • • • • • • • • • • •
FE		**********	*********	**********
) TRAUDA(193) ) TVCEQS(225) (	COMMON /RKUTTA /	, TIMES ,	DELTAT	, TRAJSO(193) ,
VCEUS(228)   VCEUS(228)   VCEUS(228)   VCEUS(228)   VCEUS(238)   VCE	+	•	TRAJOA (193)	1RAJCH(97,3)
. UUAIUAIGS) . IVX . IVX . IVY IX . IVY IX . IVY IX . IPY IX . ICY IX . ICX IX	¥ :		1VCEQS(225)	. 00A15U(65)
IYX	÷ •	•	QUATUA(65)	OUATACIES) .
IKSUMX   I   IY11X   I   IY1X   I   IPYIX   I   ICYIIX   I   ICXIIX   I   ICXIIX   I   ICXIIX   I   I   ICXIIX   I   I   I   I   I   I   I   I   I   I	á.	٠.	, x x x x x x x x x x x x x x x x x x x	IVPRX
. IV11X . I . I . I . I . I . I . I . I . I .	<b>*</b>		IKSUMX	IKPASSX
. IYPRIX . I I I I I I I I I I I I I I I I I I	λI +	•	1711X	. IV12X
IPVIX   ICYTIX   IC	٠ 1	•	IYPRIX	. IYPRI1X .
######################################	+		IPVIX	. IPVIIX
ACC(3) , ZACC(3) , VL(3) , PITCH(3) , FVM(3) , YACC(3) , RZACC(3) , YVEL(3) , RZVEL(3) , YPOS(3) , RZPOS(3) ,	O 1		ICYIIX	I REIN
ZACC(3); RVL(3); PYM(3); PYM(3); RZACC(3); RZVEL(3); RZVEL(3);	C PLOT FILE VARIABLES COMM			•
PUL(3) , QVL(3) , RVL(3) , RADCL(3) , FPITCH(3), FYAN(3) , RADCC(3) , RXVEL(3) , RZVEL(3) , RXVEL(3) , RXVEL(3	COMMON /PLOT / XACC	(3) YACC(3		, ACCR(3) .
3) FPIICH(3), FYAW(3)		- (		, VELR(3) ,
) RYVEL(3) RZVEL(3) . RYPOS(3) . RYPOS(3) . RZPOS(3) .	+	آھ		. RPOS(3)
) RYPOS(3) RZPOS(3) .	O T T T T T T T T T T T T T T T T T T T		•	RLACR(3)
. (2)(2) . (2)(2)(2)	# # # # # # # # # # # # # # # # # # #	O RYVEL	•	, KLVLK(3) ,
	DIXX			· delegar ·

```
217
83/11/07, 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      + *RZACC(1))

RXVEL(1) = TRAJSO(14) - TRAJAC(14)

RYVEL(1) = TRAJSO(15) - TRAJAC(15)

RZVEL(1) = TRAJSO(16) - TRAJAC(16)

RZVEL(1) = SORT(RXVEL(1) + RXVEL(1) + RXVEL(1)
                                                                                                                                                                                                                                                                                                                                                                                                         RXPOS(1) # TRAJSO(2) - TRAJAC(2)
RYPOS(1) # TRAJSO(3) - TRAJAC(3)
RZPOS(1) # TRAJSO(4) - TRAJAC(4)
RLPOS(1) # SQRT(RXPOS(1)*RXPOS(1)*RYPOS(1) + RZPOS(1)
+ *RPOS(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . RLACR(1)
. RLVLR(1)
. RLPSR(1)
                                                                                                                                                                                                                                           RXACC(1) = (XACCEL(1)-TRAUAC(17))/GRAVITY
RYACC(1) = (YACCEL(1)-TRAUAC(18))/GRAVITY
RZACC(1) = (ZACCEL(1)-TRAUAC(19))/GRAVITY
RLACR(1) = SQRT(RXACC(1)-RXACC(1)+RYACC(1)+RZACC(1)
FTN 4.6+428
                                                                                                                                                            IF(LINECT(7) .LE. MAXLINE) GO TO 200
CALL HEADER
WRITE(LU,7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
IF(PRTFRQ .LT. 0) GOTO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . RZACC(1)
. RZVEL(1)
. RZPOS(1)
                                                             LU=BIAS+7

IF (PRTFRQ .LE. 0) GO TO 100

IPRICNI(7) * MOD (IPRICNI(7)+1, PRTFRQ)

IF(IEVLINE .NE. 0) GO TO 100

IF(IPRICNI(7) .NE. 0) GD TO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RYACC(1)
RYVEL(1)
RYPOS(1)
                                                IF(IEVENTS(28) .NE. 0) GO TO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RAACC(1)
+ RXVEL(1)
+ RXPOS(1)
- LINECT(7) = LINECT(7) + 1
9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WRITE(LU, 7010) TIME
                                                                                                                                                                                                                                                                                                                                                                                           + *RZVEL(1))
                                                                                                                                              CONTINUE
                                                                                                                                                                                                                              CONTINUE
 SUBROUTINE REPRIT
                                                                                                                                                                                                                               8
                                                                                                                                                8
                                                                                 9
                                                                                                                                                                                                                                              6
                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                               65
                                                                                                                                                                                                                                                                                                                              75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
```

2 18	
PAGE	
83/11/07. 09.41.53	
FTN 4.6+428	-
74/74 OPT=1	
SUBROUTINE REPRIB	

SUBROUTINE REPRIB

X X X X X X X X X X X X X X X X X X X			THE PROPERTY AND	Touc
C COMMON ATRIX / GRAVITY RADGE G DEGRAD PI  C SECTION 2 COMMON BLOCK  C COMMON / IREPORT / IREPTS(31) PRTFRQ, PI1, PI2, PI3  C COMMON / MATRIX / COMMON BLOCK  C MATRIX COMMON BLOCK  C MATRIX COMMON MATRIX / COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS GOALD BLOCK  C MISCELLANEOUS GOALD  MAXENTH  HEADDIT  HEAD	C SEAL/UCCUPANI ANGULA C	R IIME HISTORY	**************************************	•
E E E E E E E E E E E E E E E E E E E	C CONSTANTS COMMON BLO C	CK ************************************	ADDEG , DEGRA	Id . C
(2) (3) (4) (5) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	C SECTION 2 COMMON BLI	OCK		*************
(2) (3) (4) (5) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	COMMON /IREPORT	/ IREPTS(31) PRTFRO, PI1, PI	, PRTFRQ, PI1, P 2, PI3	12, P13
T(2) T(2) T(2) T(2) T(2) T(3) T(3) T(3)	C MATRIX COMMON BLOCK C***********************************	/ DCMAE(3,3)	DCMRA(3,3) , DCI	MSA(3,3),
TT	•	DCMSE(3,3), DCMSAE(3,3), DCMDUM(3,3)	DCMTS(3,3) , DCI DCMOAE(3,3), DCI	:
T (2) (2) (3) (3) (4) (5) (4) (4) (4) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	C MISCELLANEGUS DATA CI			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
T T T (2) 38 (2) (3) (4) (5) (5) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	COMMON /MISC		LINECT(31)	, 1PRTCNT(31)
X X X X X X X X X X X X X X X X X X X	+ +	MAXLINE	. IERRFLG	. MAXEVNT
T(2) (2) (2) (3) (3) (3) (3) (5) (5)	+ -	IDATE	HEADALT	, HEADVEL
77(2) 38) (2) (3) 7,3) 55)		HEADROL	. HEADWGT	BIAS .
( 2 )	+ +	REPTYPE(5,31) THEADER(24)		, PRTWGHT(2)
E × × × × × × × × × × × × × × × × × × ×	•		IMVDC	,
(3) (3) (5) (5) (5) (7) (7)	•	PRIMASS(2)	PRTINDX	, PKZVEL
(2) X X X X X X X X X X X X X X X X X X X	÷ •	ZVECT(3)	, XYZ(3)	. SAVTIME
× × × × × × × × × × × × × × × × × × ×	INTEGER	REPTYPE	. BIAS	PRILNGT ,
55)	• •	PRTWGHT PRTEMP	PRTMASS	, PRT INDX
93) 7,3) 5)		COMMON BLOCK	•	*
+ 1RAJSA(193) TRAJOA(193) TRAJCH(97.3) TRAJOA(193) TRAJCH(97.3) TRAJCH(97.3) TRAJOA(193) TVCEOS(225) QUATSO(65) QUATSO(65		/ TIME . TIMES	**************************************	TRAUSO(193)
+ TRAJAC(193) TVCEOS(225) QUATSO(65) QUATSO(65) QUATSO(65) QUATSO(65) QUATAC(65) QUATAC(	+	SA(	, TRAJOA( 193)	TRAJCH(97,3)
+ QUATSA(65) . QUATAC(65) . QUATAC(65) . + INTSTP . IPCPASS . IRKPASS IYPRX IYPRX IYPRX IYPRX IYPRX IYPRX IYPRX IYPRX IYPRX IYPRIX	•	TRAJAC( 193)	. TVCEQS(225)	, QUATSO(65)
	•	QUATSA(65)	. QUATOA(65)	OUATAC(65)
+ IKX INSUMX IMPASSX   IVIX	• •	IPOINTS	IYX IYX	IYPRX
+ IVIX IVIX . IVI2X . IVI2X . IVI2X . IVPRIX . IVPRIX . IVPRIX . IVPRIX . IVPVIX . INFIN C++++++++++++++++++++++++++++++++++++	•	IKX	IKSUMX	IKPASSX .
TYDAIX TYPKIX TYPKIX TYPKIX TYPKIIX TYPKIIX TYPKIZX TYPKIX TYPYIX TYPKIX	•	IYIX	YI IX	1V12X
C PLOT FILE VARIABLES COMMON BLOCK	<b>*</b> 4	17137	TOPRIX	10/11/
C*************************************	<b>-</b> •	ICYIX	ICYI1X	IREIN
	C PLOT FILE VARIABLES (	COMMON BLOCK	•	***

```
PAGE
83/11/07, 09.41.53
                                                                                                                              C SECTION 5 COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XPOSBOT, YPOSBOT, 2POSSCS, C4SA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
RESULT2
RESULT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7000 FORMAT(/,5x,"TIME",17x,"ACCELERATION (ACS)",24x,"RATE (ACS)",
                                                                                                                                                                                                                                               IYZSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT3 = SQRT(RPPOS(1)+RPPOS(1)+RQPOS(1)+RQPOS(1)+RRPOS(1)
- +RRPOS(1)
                                                            RLACR(3)
RLVLR(3)
RLPSR(3)
 FTN 4.6+428
                                     VELR(3)
RPOS(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT2 = SQRT(RPVEL(1)+RPVEL(1) + RQVEL(1)+RQVEL(1)
                                                                                                                                                                                                                                                IYYSA
                                                                                                                                                                   COMMON /ISETALN / XPOSSRP, YPOSSRP, ZPOSSRP, XCGSA
ZCGSA , IXXSA , IXYSA , IXXSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RRACC(1)
RRVEL(1)
RRPOS(1)
                                                                          RYVEL(3) RZVEL(3) RYPOS(3) RZPOS(3) ROVEL(2) RRVEL(2) RQPOS(2)
                                                              RYACC(3) , RZACC(3)
                                     QVL(3) , RVL(3)
FPITCH(3), FYAW(3)
                                                                                                                                                                                          TYZSA , 122SA , PHISA ,
AREASA , HGHTSA , WGHTSA ,
ZPOSBOT, XPOSSCS , YPOSSCS ,
C1SA , C2SA , C3SA ,
                                                                                                                                                                              IXYSA . PHISA
                                                                                                                                                                                                                                                                                                LU-BIAS+8

IF (PRTFRQ .LE. 0) GO TO 100

IPRTCNT(8) ** MOD (IPRTCNT(8)+1, PRTFRQ)

IF(IEVLINE .NE. 0) GO TO 100

IF(IPRTCNT(8) .NE. 0) GO TO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROACC(1)
ROVEL(1)
ROPOS(1)
                                                                                                                                                                                                                                                                                                                                                                           IF(LINECT(8) .LE. MAXLINE) GO TO 200
CALL HEADER
WRITE (LU, 7000)
IF(PRIFRO .LT. 0) GOTO 8900
                                                                                                                                                                                                                                                                        DIMENSION RPACC(2), RQACC(2), RRACC(2) IF (IEVENTS(28), NE. O) GO TO 9900
                                                                                                                                                                                                                                             IXYSA .
                                     PVL(3)
FROLL(3)
RXACC(3)
RXVEL(3)
RXPOS(3)
RPVEL(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RPACC(1)
RPVEL(1)
RPPOS(1)
                                                                                                                                                                                                                                               IXXSA
                                                                                                                                                                                                                                                             1225A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LINECT(8) = LINECT(8) +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C WRITE FORMAT STATEMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + RRVEL(1).RRVEL(1))
 0PT=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RRACC(1)+RRACC(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WRITE(LU, 7010) TIME
 74/74
                                                                                                                                                                                                                                                                                                                                                                CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RE TURN
 SUBROUTINE REPRIB
                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                  8
                                                                 ဝ္ဖ
                                                                                                                               65
                                                                                                                                                                                              9
                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       505
```

£ 1.5

120

5-221

C CCCUPANT ALONE LINEAR TIME HISTORY WRT AIRCRAFT REPORT  C CONSTANTS COMMON BLOCK  C SECTION 2 COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C MAXINE	TIME HISTORY WRT AIRCRAFT REPORT GRAVITY RADDEG DEGRAD IREPTS(31) PRTFRQ, PI1, PI2, PI3 PRTFRQ, PI1, PI2, PI3 MON BLOCK IPAGECT(31) LINECT(31) IPAGECT(31) LINECT(31) HERFLG IBATE HEADALT HE	WRT AIRCRAFT REPORT  RADDEG DEGRAD PI  PRTFRQ, PI1, PI2, PI3  I2, PI3  LINECT(31) IPRTCNT(31)
C CONSTANTS COMMON BLOCK C CONSTANTS COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C SECTION 2 COMMON BLOCK C MISCELLANEOUS DATA COMMON BLOCK C MAXLINI + HEADER	(31) , RADDEG , DEGR. (31) , PRFFRQ, PI1, P. (31) , LINECT(31) E , MAXREPT E , HEADALT	12, P13
C COMMON /CONSINI / GRAVITY C SECTION 2 COMMON BLOCK C COMMON /IREPORT / IREPTS INTEGER PRIFRO C MISCELLANEOUS DATA COMMON BLOCK COMMON /MISC / IPAGEC COMMON /MISC / IPAGEC HEADSR HEADSR HEADSR HEADSR HEADSR	Y , RADDEG , DEGR.  (31) , PRTFRQ, PI1, P  PI1, PI2, PI3  OCK  (31) , LINECT (31)  E , MAXREPT  E , HEADALT	AD PI
C SECTION 2 COMMON BLOCK C C COMMON INTEGER C C C C C C C C C C C C C C C C C C C	(31) , PRTFRQ, P11, P P11, P12, P13 OCK (131) , LINECT(31) E , HEAREPT E , HEARLE	12, P13
COMMON / IREPORT / IREPTS COMMON / IREPORT / IREPTS INTEGER CMISCELLANEOUS DATA COMMON BL( C	(31) . PRFFRO, PI1, P . PI1, PI2, PI3 OCK (131) . LINECT (31) E . MAXREPT E . HEAPLG	12, P13
INTEGER  C	<u>:</u> :::::::::::::::::::::::::::::::::::	IPRICNI(31)
NINO WISC	:=	. IPRTCNT(31)
COMMON /MISC	=	. IPRTCNT(31)
+ MAXLIN + 1 EVLIN + 1 DATE + HEADSR + HEADROI + HEADROI + HEADROI + THEADROI	• • •	
+ 10ATE + HEADSR + HEADSR + HEADROI + REPTYPI		, MAKEUNI
+ HEADSR + HEADROI + REPTYPI + INEADEI		. HEADVEL .
+ HEADROI + REPTYPI + IHEADEI +	. HEADYAW	. HEADPIT
+ REPTYPE + IMEADE! +	•	, BIAS
+ IMEADER	31).	PRTWGHT(2)
•	•	. TIMES(38)
(C)SSWING +	S(2) PRIINDX	
+ ZVECT(3)		SAVIIME
	•	, ZACCEL(3)
INTEGER REPTYPE	E BIAS	. PRTLNGT .
	DOTMACC	NON I LOOK
•••••	- :	************
	LOCK	•
	•	TRAJS0(193)
TRAUS	• •	TRAJCH(97,3)
+ TRAJAC( 193)		, QUATSO(65)
+ QUATSA(65)	•	, QUATAC(65) ,
+ INTSTP	•	, IRKPASS ,
+ IPOINTS	•	. IYPRX
+	, IKSUMX	IKPASSX
X1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	IVI 4X	. IV12X
XEIAI +	. IYPKIX	IVERITY
TIPRIZA +		
FILE VARIABLES CO	•	***
•••••	:	
COMMON /PLOT / XACC(3)		ACCR(3)
+ PVL(3)		. VEI.R(3) .
+ + + + + + + + + + + + + + + + + + + +	DAMA COLONIA	, KPUS(3)
+ RXVEL(3)		REVER(3)
+ RXP0S(3)		RLPSR(3)
+ RPVEL (2)	_	

```
RLACR(2)
RLVLR(2)
RLPSR(2)
LU=BIAS+9

IF (PRTFRO .LT. 0) GO TO 100

IF(IEVENTS(28) .EQ. 0) GD TO 9900

IF (PRTFRO .EQ. 0) GOTO 100

IPRTCNT(9) ** MOD (IPRTCNT(9)+1, PRTFRO)

IF(IEVLINE .NE. 0) GO TO 100

IF(IPRTCNT(9) .NE. 0) GO TO 9900

IF(INECT)

CALL HEADER

WRITE(LU,7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)

IF(PRTFRO .LT. 0) GOTO 9900

200 CONTINUE
                                                                                                                                                                                                                                 . RZACC(2)
. RZVEL(2)
. RZPOS(2)
                                                                                                                                                                                                                                  RYACC(2)
RYVEL(2)
RYPOS(2)
                                                                                                                                                                                                                                 C WRITE FORMAT STATEMENTS
                                                                                                                                                                                                                           WRITE (LU, 7010) TIME
                                                                                                                                                                                                                                                                   9900 CONTINUE
                                                                                                                                                                                                                                                                           RETURN
                                                                                               200
                                                         8
                  9
                                                                                               2
                                                                                                                                       75
                                                                                                                                                                              8
                                                                                                                                                                                                                    85
                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                  95
                                                         65
                                                                                                                                                                                                                                                                                                                                         8
```

	IME HISTORY W	SEAT ALONE LINEAR TIME HISTORY WRT AIRCRAFT REPORT	•
C CONSTANTS COMMON BLOCK	OCK		
COMMON /CONSTNT / GRAVITY RADDEG DEGRAD PI	/ GRAVITY	RADDEG DEGRAD	AD PI
C SECTION 2 COMMON BLOCK	LOCK		
Control COMMON / IREPORT / IREPIS(31) . PRIFRQ.PI1.PI2.PI3	/ IREPTS(31) PR	PRTFRQ, PI1, PI2, PI3	12, PI3
			**************
C MISCELLANEOUS DATA COMMON BLOCK	COMMON BLOCK		
COMMON /MISC	/ IPAGECT(31)	-	IPRTCNT(
•	MAXLINE	_	. MAXEVNT
•	IEVL INE	, TERRFLG	27
<b>•</b> 4	IDATE	. HEADALI	, HEADVEL
• •	HEADROIL	HEADEST	BIAS
•	REPTYPE(5,31)		PRIWGHT(2)
•	IHEADER(24)	I EVENTS	, TIMES(38)
•		IMVDC	. PRTEMP( 2)
•	PRIMASS(2)	. PRTINDX	. PKZVEL
+	ZVECT(3)	. XYZ(3)	SAVTIME
+	XACCEL(3)	. YACGEL(3)	. ZACCEL(3)
INTEGER	REPTYPE	. BIAS	. PRICNG!
<b>+ +</b>	PRIEMP	PRIMASS	, PRT INDX
		:	*************
C INTEGRATION ROUTINE	COMMON BLOCK		
COMMON /RKUTTA		DELTAT	TRA-50(193)
+	TRAJSA	•	. TRAJCH(97,3)
•	TRAJAC( 193)	•	. QUATSO(65) .
*	QUATSA(65)	. QUATOA(65)	. QUATAC(65) .
+ 4	INTSTP	. IPCPASS	IRKPASS .
<b>.</b>	SINIS		
• •	XIXI	I V I V I	IVIZX
•	IVI3X	IYPRIX	IVPRIIX
•	IVPRI2X	. IPVIX	. IPVI 1X
+	ICVIX		IREIN
C PLOT FILE VARIABLES COMMON BLOCK	COMMON BLOCK		***
**************************************	**********	*****	
COMMON /PLUI /	XACC(3) . YA	VACC(3) ZACC(3)	. ACCR(3)
• •			. VECR(3) .
•			RLACR(3)
•		. RZVEL (	RIVLR(3)
•	AXPOSES) BY	DVDDC(3) DVDDC(3)	01000101
			. (C)NC-11

```
RXACC(3) = (TRAJSA(17)-TRAJAC(17))/GRAVITY

RYACC(3) = (TRAJSA(18)-TRAJAC(18))/GRAVITY

RYACC(3) = (TRAJSA(18)-TRAJAC(18))/GRAVITY

RZACC(3) = (TRAJSA(19)-TRAJAC(18))/GRAVITY

RAZACC(3)

+ *RZACC(3)

RXVEL(3) = TRAJSA(14) - TRAJAC(14)

RXVEL(3) = TRAJSA(15) - TRAJAC(16)

RXVEL(3) = TRAJSA(15) - TRAJAC(16)

RYVEL(3) = TRAJSA(15) - TPAJAC(16)

RYVEL(3) = TRAJSA(15) - TPAJAC(16)

RYPOS(3) = TRAJSA(2) - TPAJAC(16)

RZPOS(3) = TRAJSA(3) - TRAJAC(3)

RZPOS(3) = TRAJSA(4) - TRAJAC(3)

RZPOS(3) = TRAJSA(4) - TRAJAC(4)

RZPOS(3) = TRAJSA(4) - TRAJAC(4)

RZPOS(3) = TRAJSA(4) - TRAJAC(4)

RZPOS(3) = TRAJSA(4) - TRAJAC(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C WRITE FORMAT STATEMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7000 FDRMAT(/,5x,"TIME",17x,"ACCELERATION (ACS)",22x,"VELOCITY(ACS)",
30x,"POSITION (ACS)",5x,"(SEC)",22x,"(G[S)",32x,"(",
4 A2,"/SEC)",38x,"(",A2,")",
17x,3(4x,"x",9x,"v",9x,"z",7x,"RES",5x),/)
7010 FDRMAT(1x,F9.4,2x,3(4(F10.2),1x))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RLACR(3)
RLVLR(3)
RLPSR(3)
                                                                                                                                                     IF(LINECT(10) .LE. MAXLINE) GO TO 200
CALL HEADER
WRITE(LU,7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
IF(PRTFRO .LT. 0) GOTO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RZACC(3)
RZVEL(3)
RZPOS(3)
RYACC(3)
RYVEL(3)
RYPOS(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RXACC(3)
+ RXVEL(3)
+ RXPGS(3)
- LINECT(10) = LINECT(10) + 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WRITE(LU, 7010) TIME
                                                                                                                                                                                                                                     200 CONTINUE
                                             0
                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                 75
                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95
```

CK	C	SEAT ALONE ANGULAR TIME HISTORY WRT AIRCRAFT REPORT	IME HISTORY WRT	AIRCRAFT REPOR	•
C SECTION 2 COMMON / IREPORT / IREPTS(31) PRTFRQ, P11, P12, P13  C MATRIX COMMON / IREPORT / IREPTS(31) PRTFRQ, P11, P12, P13  C MATRIX COMMON / MATRIX / DCMAE(3.3) DCMSA(3.3)		CONSTANTS COMMON BLO	CK		
COMMON / IREPORT / IREPTS 13   DRIFFRO, PII, PI2, PI3    INTEGER PREFRO, PII, PI2, PI3    COMMON / MATRIX / DOMAE(3,3) DCMAR(3,3) DCMSR(3,3)    COMMON / MATRIX / DCMSE(3,3) DCMSR(3,3) DCMSR(3,3)    COMMON / MISC / IPAGECT(3) DCMSR(3,3) DCMSR(3,3)    COMMON / MISC / IPAGECT(3) LINECT(3)   IPRTCNT(3)    COMMON / MISC / IPAGECT(3)   LINECT(3)   IPRTCNT(3)    COMMON / MISC / IPAGECT(3)   LINECT(3)   IPRTCNT(3)    COMMON / MISC / IPAGECT(3)   LINECT(3)   IPRTCNT(3)    COMMON / MISC / IPAGECT(3)   LINECT(3)   IPRTCNT(3)    COMMON / MISC / IPAGECT(3)   LINECT(3)   IPRTCNT(3)    COMMON / RUTIA / ITAE   IRADIAL   HEADVEL    COMMON / RUTIA / ITAE   ITAES   IPAGECT(3)    COMMON / RUTIA / ITAE   ITAES   IPAGECT    COMMON / RUTIA / ITAE   ITAES    COMMON / RUTIA / ITAE   ITAES    COMMON / RUTIA / ITAE   IPAGECT    COMMON / RUTIA / ITAE   ITAE    COMMON / RUTIA / ITAE   ITAE    COMMON / RUTIA / ITAE    COMMON		COMMON /CONSTNT	/ GRAVITY R.	ADDEG , DEGRA	I d ' O
COMMON / MATRIX / DOMRE(3.3) DCMSA(3.3) DCMS	. č	COMMON / IREPORT	/ IREPTS(31)	. PRIFRQ, PI1.P 2.P13	12. PI3
COMMON / MATRIX / DCMAE(3.3) DCMRA(3.3) DCMSA(3.3) .  + DCMSAE(3.3) DCMTS(3.3) DCMSR(3.3) .  + DCMSAE(3.3) DCMSS(3.3) DCMSR(3.3) .  DCMSAE(3.3) DCMSR(3.3) DCMSR(3.3) .  MISCELLANEOUS DATA COMMON BLOCK  CDMMON / MISC / IPAGECT(31) LINECT(31) . IPRTCNT(31) .  MAXLINE   HAADEL   HAADEL   HAADEL   HAADEL    + HEADER   HEADER   HEADEL   HAADIT   HAADIT    + HEADER   HEADER   HEADET    + HEADER   HEADER    + HEADER    + HEADER    + HEADER    HEADER    + HEADER    + HEADER    HEADER    + HEADER    HEADER    HEADER    + HEADER    + HEADER    HEADER    + HEADER    HE		MATRIX COMMON BLOCK	***	· · · · · · · · · · · · · · · · · · ·	
## COMMON / MISCELLANEOUS DATA COMMON BLOCK  CDMMON / MISC	č	COLECT ABSTRACT	**************************************	**************************************	******
DCMSAE(3,3), DCMOAE(3,3), DCMSR(3,3), DC			DCMSE(3.3)		MTE(3,3)
MISCELLANEOUS DATA COMMON BLOCK  CDMMON /MISC		. •		DCMOAE(3,3), DC	MSR(3,3)
### STATE		•	•	*********	•
CDMMON /MISC / IPAGECT(31) , ILNECT(31) , IPRTCNT(31)  + HADDEL   IENLINE   IERRELG   LU    + HEADDEL   HEADDEL   HEADDEL    + HEADDEL   HEADDEL    + HEADDEL   HEADDEL    + HEADDEL   HEADDEL    + HEADDEL   HEADDEL    - HEADDEL    - HEADDEL   HEADDEL    - HEADDEL	Ü	MISCELLANEOUS DATA C			
CDMMON /MISC / IPAGECI(31) . LINECI(31)  HEADSR HEADALT  HEADSR HEADALT  HEADROL HEADALT  REPTYPE 5.31) FUNDC  PRIMOS	ؽؙ		*	*********	******
FERTICAL   FERTICAL		COMMON /MISC	/ IPAGECT(31)	. LINECI (31)	, IPRICNI(31)
HEADYAW   HYDRAY   H		+ 1	MAXLINE	I EDDE I G	. MAKEVNI
HEADFOL		• •	IDATE	HEADALT	HEADVEL
HEADROL   HEADWGT   BIAS   FRINGHT   BIAS   FRINGHT   FRINGHT   BETUTYPE   FRINGHT		•	HEADSR	HEADYAW	HEADPIT
HEADER(24)   PRILNGT(2)   PRINGHT(1)		•	HE ADROL	, HEADWGT	, BIAS
HEADER(24)   IEVENTS(38)   TIMES(38)		+	REPTYPE(5.31)	, PRTLNGT(2)	, PRIWGHT(2)
PRTMASS(2)   PRTINDX   P. EL ZVECT(3)   XYZ(3)   XYZ(3)   ZACCEL(3)   ZACCEL		•	IHEADER(24)	, IEVENTS(38)	MES (38
TVECT(3)  ***XACCEL(3)  **XACCEL(3)  ***XACCEL(3)  ***XACC		•	10/254700	IMADO	<u>,</u>
INTEGER   REPTYPE   BIAS   PRTWGHT   PRTWGHT   PRTWGHT   PRTMASS		• •	7VFCT(3)	XVZ(3)	SAVIIME
INTEGER   REPTYPE   BIAS		•	XACCEL(3)	YACCELES	
PRIMASS  INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME , TIMEB , DELTAT		INTEGER	REPTYPE	. BIAS	, PRTLNGT
INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTA / TIME . TIMEB . DELTAT		* *	PRIME	. PRIMASS	YON! I'MD
INTEGRATION ROUTINE COMMON BLOCK		• • • • • • • • • • • • • • • • • • • •	:	*******	
COMMON /RKUTTA / TIME , TINEB , DELTAT  TRAJSA(193)   TRAJOA(193)    TRAJAC(193)   TVCEOS(225)    TVCEOS(225)   TVCEOS(225)    TVCEO		INTEGRATION ROUTINE		:	***************************************
TRAJSA(193) TRAJOA(193)  TRAJAC(193) TVCEOS(225)  OUATSA(65) QUATOA(65)  INTSTP IPCPASS  IPOINTS IYX  IXX IYIX  IVIX IYIX  IVIX IYPRIX  IVPRIX IPPRIX  ICVIX ICVIX		COMMON /RKUTTA			TRAUSO(193)
IRAJAC(193)   TVCEQS(225)   TRAJAC(193)   TVCEQS(225)   TRAJAC(193)   TRCASS   TRAJAC(193)   TRAJA		•	¥	, TRAJOA(193)	. TRAJCH(97,3) .
OUATSA(65) , OUATOA(65) INTSTP		•	TRAJAC( 193)	. TVCEQS(225)	. QUATSD(65) .
INTSTP IPCPASS IPDINTS IYX IKX IXSUMX IVIX IVIX IVIX IVPRIX IVPRIZX IPPRIX ICVIX ICVIX		•	QUATSA(65)	, OUATOA(65)	. QUATAC(65) .
IPOINTS		+	INTSTP	. IPCPASS	, TRKPASS .
		•	1POINTS	. IYX	. IYPRX
IVIX IVI3X IVPRIX IVPRIZX ICVIX ICVIX		+	IKX	IKSUMX	. IKPASSX
IYPRIZX ICVIX ICVIIX		• •	1717	I VDD I X	1 V D D 1 1 X
ICYIX			1 V P R 1 2 X	XI Adl	IPYLIX
		. +	ICVIX	ICVIIX	IREIN
	0	•	:	•	**********

2

75

8

```
C WRITE FORMAT STATEMENTS

C WRITE FORMAT STATEMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C SECTION 5 COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT1
RESULT2
RESULT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IYZSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RRVEL(2)*RRVEL(2))
RESULT3 = SQRT(RPPOS(2)*RPPOS(2)*RQPOS(2)*RPPOS(2)
VELR(S)
RPOS(3)
RLACR(3)
RLVLR(3)
RLVER(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RPPOS(2) = ZARCIAN(DCMSA(1,3), DCMSA(3,3)) + RADDEG

RQPOS(2) = -ASIN(DCMSA(1,3)) + RADDEG

RRPOS(2) = (ZARCIAN(DCMSA(1,2),DCMSA(1,1)) + RADDEG

RPACC(2) = (TRAJSA(23) - TRAJAC(23)) + RADDEG

RQACC(2) = (TRAJSA(24) - TRAJAC(24)) + RADDEG

RRACC(2) = (TRAJSA(24) - TRAJAC(24)) + RADDEG

RPVEL(2) = (TRAJSA(12) - TRAJAC(11)) + RADDEG

RQVEL(2) = (TRAJSA(12) - TRAJAC(12)) + RADDEG

RRACL(2) = (TRAJSA(12) - TRAJAC(12)) + RADDEG

RRYCL(2) = (TRAJSA(13) - TRAJAC(13)) + RADDEG

RESULT1 = SORT(RPACC(2)+RPACC(2)+ROACC(2)+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT2 = SQRT(RPVEL(2)*RPVEL(2) + RQVEL(2)*RQVEL(2) +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMON /ISETALN / XPOSSRP, YPOSSRP, ZPOSSRP, XCGSA, 1XXSA, 1XYSA, 1XZSA, 1XYSA, 1XZSA, 1XYSA, 1XXSA, 1XXSA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRACC(2)
RRVEL(2)
RRPOS(2)
                                                               | FPIICH(3), FYAW(3) | RACC(3) | RAACC(3) | RAVEL(3) | RAVEL(3) | RAVEL(3) | RAVEL(2) | RAVEL(2) | RAPOS(2) | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LU-BIAS+11

IF (PRTFRQ LT 0) GO TO 100

IF (EVENTS(2P) EQ. 0) GO TO 9900

IF (PRTFRQ EQ. 0) GOTO 100

IP PRTCNT(11) = WDD (IPRTCNT(11)+1, PRTFRQ)

IF (IPRTCNT(11) NE. 0) GO TO 100

IF (IPRTCNT(11) NE. 0) GO TO 9900

OCONTINUE

IF (IPRTCNT(11) LE. WAXLINE) GO TO 200

CALT HADER

WRITE (LU, 7000)

IF (PRTFRQ LT. 0) GOTO 9900

OCCONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RQACC(2)
RQVEL(2)
RQPOS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DIMENSION RPACC(2), ROACC(2), RRACC(2)
                                                                           FROLL(3)
RXACC(3)
RXVEL(3)
RXPOS(3)
RPVEL(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RPACC(2)
RPVEL(2)
RPPOS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LINECT(8) = LINECT(8) +
9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + RRACC(2)+RRACC(2))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WRITE (LU, 7010) TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
```

82

8

95

8

SUBROL	JTINE	SUBROUTINE REPRT11	74/74 OPT=1	0PT=1	FTN 4.6+428	83/11/07 09.41.53	09.41.53	PAGE	227
511		7000 FORMA	7(/, 5x, *1 29x, *06 30x. *(E	1(/,6x,"TIME",17x,"ACCELERATION (ACS)",24x,"RATE (ACS)", 29x,"ORIENTATION (ACS)",/,5x,"(SEC)",18x,"(DEG/SEC 2)", 30x,"(DEG/SEC)",36x,"(9EG)",/,	24X,"RATE (ACS)", 18X,"(DEG/SEC 2)",				
120		+ 7010 FORMAT	Ξ	17X,2(4X,"X",9X,"Y",9X,"Z",7X,"RES",5X), 3X,"RDLL",5X,"PITCH",6X,"YAW",6X,"RES"/) [(1X,F9.4,2X,3(4(F10.2),1X))	(*).				

C SELTOCLIAND GOCCS COMMON BLOCK C SELTOCCIDANT FORCES COMMON BLOCK C SELTOCCIDANT FORCES COMMON BLOCK C COMMON / FORCES COMMON BLOCK C SECTION 9 COMMON BLOCK C SECTION 9 COMMON BLOCK C SECTION 9 COMMON BLOCK C SECTION 1 COMMON LICATOL   FORCESCO   FARSOO   FORCESCO   FOR	C CATAPULT FORCE C SEAT/DCCUPANT C SEAT/DCCUPANT C SECTION 9 COM C SECTION 2 COM C SECTION 3 COM C SECTION 3 COM C SECTION 4 COM C SECTION 7 C		CASO(2), FZCA TUBSO, FZTU SLSO(6), FZSL RKSO(6), FZSL CHSO(3), FZCH AESO, FZDR ORTSO, FZDR YPOSAP(2), YPOSAP(2), YPOSAP(2), WUTUBE, MUTUBE, WUTUBE, PRTFRU, PII, P	00(2) 350 350 30(3) 30(3) 30 50 50 50 50 50 50 50 50 50 50 50 50 50
SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2)	C SEAT/GCUPANT C SEAT/GCUPANT C SECTION 9 COM C SECTION 7 COM C SECTION 2 COM C SECTION 3 COM C SECTION 4 COM C SECTION 4 COM C SECTION 5 COM C SECTION 6 COM C SECTION 7 IN TEGER C SECTI		CASO(2), FZCA SLSO(6), FZTU SLSO(6), FZTU RKSO(6), FZRK CHSO(3), FZCH AESO, FZOR ORTSO, FZOR YPOSAP(2), YPOSAP(2), MUTUBE, MUTUBE, WUTUBE,	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c
COMMON / FORCESO / FXCASO(2) FYCASO(2) FZCASO(2) FZUBSO FZUBSO FXUBSO FYTUBSO FZUBSO(6) FZEKSO(6) FZEKSO(6) FZEKSO(6) FZEKSO(6) FZEKSO(6) FXRKSO(6) FZEKSO(6) FXAESO FXAESO FYORTSO FZECTON SECTION 9 COMMON BLOCK COMMON / ICATPL / INCAT COMMON / ICATPL /	C SECTION 9 COME C SECTION 9 COME C SECTION 9 COME C SECTION 7 COME C SECT	• 14 14 14 14 14 14 1	CASO(2), F2CA TUBSO, F2TUA SLSO(6), F2SL RKSO(6), F2RK CHSO(3), F2CH AESO, F2RK FACH ORTSO, F2DR (CATLNT(2), O YPOSAP(2), WUTUBE, MUTUBE, MUTUBE, MUTUBE, MUTUBE,	50(2) 50(6) 50(6) 50(3) 50(3) 50 50 750 750 7108 7
## FX51850 FY1850 F71850 ### FX51850 FY1850 ####################################	C SECTION 9 COM C SECTION 9 COM C COMMON / IS C SECTION 2 COM C SECTION 3 COM	<u> </u>	TUBSO FZIU SLSO(6), FZSL SLSO(3), FZCH CHSO(3), FZCH AESO FZOR DRTSO FZOR CATLNT(2), YPOSAP(2), YPOSAP(2), MUTUBE MUTUBE MUTUBE MUTUBE MUTUBE MUTUBE MUTUBE	50(6), (50(6),
FXSLSO(6)   FYSLSO(6)   FYSLSO(6)	C. SECTION 9 COM C. SECTION 9 COM C. COMMON / IC C. SECTION 2 COM C. SECTION 2 COM C. SECTION / IC C. MISCELLANGOUS ( C. MISCEL	M. M	SLSO(6), FZSL RKSO(6), FZRK CHSO(3), FZAEL DRTSO, FZOR YPOSAP(2), YPOSAP(2), WUTUBE, MUTUBE, MUTUBE, PRTFRU, PII, P.	50(6) 50(3) 50(3) 50 150 150 1708 17108 17
## FXRKSO(6)   FYRKSO(6)   FYRKSO(3)   ## FXCHSO(3)   FYCHSO(3)   FYCHSO(3)   ## FXCHSO(3)   FYCHSO(3)   ## FXCHSO(3)   FYCHSO(3)   FYCHSO(3)   ## FXCHSO(3)   FYCHSO(3)   FYCHSO(3)   ## FXCHSO(3)   ## FXCHSO(3)	C SECTION 9 COM C SECTION 9 COM C COMMON / IG C SECTION 2 COM C SECTION 2 COM INTEGER C SECTION 2 COM C SECTION 3 COM C SECTIO	<u> </u>	RKSO(6) FZRK CHSO(3) FZCH AESO FZCH DRTSO FZCH CAILNT(2) V YPOSAP(2). YPOSAP(2). MUTUBE MUTUBE MUTUBE PRTFRU, PII, P	50 (5) (50 (5) (50 (5) (5) (5) (5) (5) (5) (5) (5) (5) (5)
FXAESO FYAESO FXAESO FARESO FXAESO FARESO FXAESO FXAESO FXAESO FXAESO FXAESO FXAESO FXAESO FYDRISO FYD	C SECTION 9 COM C SECTION 9 COM C SECTION 2 COM C SECTION 3 CO	<u> </u>	CHSO(3), FZCH AESO, FZAE DRISO, FZDR CAILNI(2), YPOSAP(2), YPOSAP(2), ITUBENO, MUTUBE, MUTUBE, WITUBE, PRTFRU, PII, P.	50
FXDRTSO   FYARSO   FZDRTSO	C SECTION 9 COM C SECTION 9 COM C COMMON / IG. C SECTION 2 COM C SECTION 2 COM C SECTION 2 COM C MISCELLANEOUS C C MISCELLANEOUS C C MISCELLANEOUS COMMON / MISCELANEOUS COMMON / MISCELANE	<u> </u>	AESO FZAE DRTSO FZDR CATLNT(2), YPOSAP(2), ITUBENO F MUTUBE MUTUBE WITTUBE YPTFRU, PII, P	150 150 160 160 160 160 160 160 160 16
SECTION 9 COMMON BLOCK  COMMON /ICATPLY / INCAT	C SECTION 9 COM C SECTION 9 COM C SECTION 2 COM C SECTION 2 COM C SECTION 2 COM C SECTION 2 COM C MISCELLANEOUS I C MISC		CATLNT(2), YPOSAP(2), ITUBEND, MUTUBE MUTUBE MUTUBE PRTFRU, PII, P	ALSTK(2), TC1 (2 POSAP(2), NPT SCT (2 TUBE CTUBE XTLNGT TCATOUT
SECTION 9 COMMON BLOCK	C SECTION 9 COM COMMON / IG. C SECTION 2 COM C SECTION 3 COM C SECTION 3 COM C SECTION 4 COM C		CATLNT(2). YPOSAP(2). ITUBEND. MUTUBE. MUTUBE. PRTFRU, PI1, P.	A I STK(2), TCI (2 POSAP(2), NPT SCT (2 CTUBE CTUBE XTLNGT TCATOUT
COMMON /ICATPLT / INCAT  **COMMON /ICATPLT / ICATPLT /	COMMON / IG.  COMMON / M.I.		CAILNT(2), YPOSAP(2), YPOSAP(2), ITUBEND, NUTUBE, MUTUBE, NUTUBE, NUTUBE, PRTFRU, PII, P. PI3	ALSTK(2) TCI (2 POSAP(2),NPTSCT(2 CTUBE CTUBE XTLNGT ICATOUT
### ### ##############################	COMMON /ILL COMMON		YPOSAP(2). YPOSAP(2). ITUBEND. MUTUBE. MUTUBE. PRIFRU, PII, P	POSAP(2), NUL POSAP(2), NUL TUNE CTUBE XTLNGT TOATOUT
### ##################################	REAL C.SECTION 2 COM C.SECTION 2 COM C.SECTION 2 COM INTEGER C.SECTION 2 COM C	· • • • •	TUBEND MUTUBE MUTUBE MUTUBE MUTUBE MUTUBE MUTUBE PRIFRU, PI1, P. PI3	TUBE COURE COURE COURE COURE COURE COURE COURE COURE COURE COUR COUR COUR COUR COUR COUR COUR COUR
### PTUBE	REAL C.SECTION 2 COM C.SCCTION 2 COM C.SCCTION / IN INTEGER C.SCCTION / INITEGER C.SCCTION /		MUTUBE MUTUBE MUTUBE MUTUBE PRTFRU, PI1, P	EXTINGT TOTATION
REAL KTUBE   WITTON	REAL C.S.C.TION 2 COM C.S.C.TION 1 COM C.S.C.TION / COM C.S.C.T.C.S.C.C.S.C.C.S.C.S.C.S.C.S.C.S.		PRTFRU, PI1, P	2. P13
SECTION 2 COMMON BLOCK  COMMON / IREPORT / IREP'S(31) INTEGER  MISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECI(31)  HANDER   HEADALT   HEADVEL   HEADRIT   HEADVEL   HEADRIT   HEADVEL   HEADRIT   HEADVEL   HEADRIT   HEADVIT   HEADRIT   HE	C SECTION 2 COM C SECTION 2 COM COMMON / IRI INTEGER C MI SCELLANEOUS G C MI SCELLANEOUS		PRTFRU, PI1, P	12. P13
SECTION 2 COMMON BLOCK	C SECTION 2 COM COMMON / IRI INTEGER C MISCELLANEOUS C C MISCELLAN		PRTFRU, PI1, P.	2, P13
COMMON / IREPTS(31)  INTEGER  MISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGEC1(31) . IINEC1(31) . IPRICNI(31)  HAXRED . MAXEPT . MAXEVIT .	COMMON / IR INTEGED C MI SCELLANEOUS F C MI SCELLANEOUS F COMMON / MI		PRIFRU, PII, P	2. P13
COMMON / IREPTS(31) , PRTFRO, P11, P12, P13  INTEGER  PRTFRO, P11, P12, P13  MISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) , IINECT(31) , IPRICNT(31)  HANDLINE , MAXEPT , MAXEVNT   HEADSR , HEADALT , HEADVEL   HEADSR , HEADYAW , HEADPIT   HEADROL   HE	COMMON / IRI INTEGER C. MISCELLANEOUS C. MISCELLANEOUS C. MISCELLANEOUS C. MISCELLANEOUS T. MISCED T. MISCED T. MISCED	- * •	PRIFRU, P11, P. P13	[2, P13]
INTEGER	C. MISCELLANEOUR / MISCELLANEOUR / MISCELLANEOUR / MISCELLANEOUR / MISCELLANEOUR / MISCEL MIS	- * •	, PI3	
#ISCELLANFOUS DATA COMMON BLOCK  COMMON / MISC	C MI SCELLANEOUS / MI SCEU	* *		
## SCELLANEOUS DATA COMMON BLOCK  COMMON / MISC	C MISCELLANEOUS COMMON / MISCED			
COMMON /MISC / IPAGECT(31) , IINECT(31)	COMMON / MI			
HEADSH   HEADVEL   HEADVEL   HEADVEL	1		INFCICAL	1PB1CN1(31)
HEADSR   HEADLT   HEADVEL	+ + + + + + + + + + + + + + + + + + +		MAXREPT	MAXEVNI
HEADSR   HEADALT   HEADVEL	+ + + + + + + + + + + + + + + + + + +	I EVLINE	TERRFLG	ח
HEADSR	+ + + + + + + + + + + + + + + + + + +	IDATE	HEADAL T	HEADVE
HEADROL   HEADWGT   BIAS	+ + + + + + + + + + + + + + + + + + +	HEADSR	HEADYAW	HEADPIT
HEADER(24)   FEVENTS(38)   TIMES(38)	+ + + + + + + + + + + + + + + + + + +	HEADROL	HEADWGT	BIAS
HEADER(24)   IEVENTS(38)   TIMES(38)	+ + + + + + + + + + + + + + + + + + +	REPTYPE (5,31)	PRTINGI(2)	PRIWGHT (2)
HWUDC   PRTEMP( 2)	+ + + + + + + + + + + + + + + + + + +	1HE ADER(24)	, IEVENTS(38)	11MES(38)
+ PRIMASS(2) , PRIINDX , PKZVEL  ZVECT(3) , XYZ(3) , SAVIIME  ZACCEL(3) , YACCEL(3) , ZACCEL(3)  INTEGER	+ + +		IMVDC	. PRTEMP( 2)
+ ZVECT(3) , XYZ(3) , SAVTIME	+ + 0 9 0 3 IWI	PRTMASS(2)	. PRTINDX	, PKZVEL
NIEGER   REPTYPE   BIAS   PRILINGT	+	<b>2VECT(3)</b>	. XYZ(3)	SAVIIME
INTEGER   REPTYPE   BIAS   PRTINGT	0303191	XACCEL(3)	. YACCEL(3)	ZACCEL(3)
PRIMGHT   PRIMASS   PRIINDX	100121	REPTYPE	BIAS	PRTLNGT
PRIEMP   PRIEMP   PRIMASS   PRIINDX	•	PRIWGHT		
NTEGRATION ROUTINE COMMON BLOCK   COMMON PLOCK   TIME   COMMON PLOCK   COMMON PLOCK   COMMON PLOCK   COMMON PRUITA   TIME   TIME   DELTAT   TRAUSO(193)   TRAUSON   TR	•		, PRIMASS	, PRTINDX
COMMON /RKUITA / 11ME . 11ME5 . DELTAT . TRAUSO(193)	INTE	*	***	•
		•	7	•
TVCEQS(225) QUATDA(65) IPCPASS IYX	COMMUN / KKI	/ 11ME . 11MES .		
QUATOR(65)	• •	•		
IPCPASS IYX IXX IXSUMX	- +	•	OUATOA (65)	OUATAC(65)
S IVX	•	•	IPCPASS	IRKPASS
1KSUMX	+	IPOINTS	17.7	LYPRX
	•	. X	) KSIIII	IKPASSX

```
229
PAGE
83/11/07, 09.41.53
                                                                                         C TORQUE SEAT/OCCUPANT COMMON BLOCK
                                                                                                                           IF (INCAT . EQ. 1) WRITE (LU, 7001) PRTWGHT (PRIINDX), PRTWGHT (PRTINDX),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRILNGI(PRIINDX)

2) WRITE(LU,7002) PRIWGHT(PRIINDX),PRIWGHI(PRIINDX),
PRILNGI(PRIINDX),PRIWGHI(PRIINDX),
PRIWGHT(PRIINDX),PRILNGI(PRIINDX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULTI
RESULT2
RESULT3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WRITE(LU,7011) TIME . FYCASO(1) . FZCASO(1) . RESULT1. FXCASO(1) . TMCASO(1) . TMCASO(1) . TMCASO(1) . TMCASO(1) . TMCASO(1) . TMCASO(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT4
FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF(INCAT NE 2) GO TO 230
RESULT3 = SQRT(FXCASO(2)*FXCASO(2) + FYCASO(2)*FYCASO(2)
+ FZCASO(2)*FZCASO(2))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT4 = SORT(TLCASO(2)*TLCASO(2) + TMCASO(2)*TMCASO(2)
+ TNCASS(2)*TNCASO(2))
                                             . IYPRIIX
                                                               IPYI 1X
                                                                             IREIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT1=SQRT(FXCASO(1)+FXCASO(1)+FYCASO(1)+FYCASO(1)+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT2=SQRT(TLCASO(1)+TLCASO(1)+1MCASO(1)+TMCASO(1)+
                                                                                                                                     •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . FZCASO(1)
. TNCASO(1)
. FZCASO(2)
. TNCASO(2)
                                                                                                                                                                                                                                                                 IF (PRIFRO LT. 0) GO TO 100

IF ((IEVENTS(1) EQ. 0) OR (IEVENTS(3) NE. 0)) GO TO 9900
                                                                                                                                                                                                                                                                                                                  IF (PRIFRQ .EQ. 0) GOTO 100
IPRICNT(12) = MOD (IPRICNT(12)+1, PRIFRQ)
IF(IEVLINE .NE. 0) GO TO 100
IF (IPRICNT(12) NE. 0) GO TO 9900
                                                                               ICYI1X
                                                             . IPYIX
                                                                                                                                                                                                                       . TMAESO . TMDRTSO
                                                                                                                                                                                                                                                                                                                                                                                                 IF (LINECT(12) , LE. MAXLINE) GO TO 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF(PRIFRO .LT. 0) GOTO 9900
                                                                                                                                                                                                                       TLAESO
TLDRTSO
                                                             1YPR12X
                                                                               ICYIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L INECT(12)=LINECT(12)+1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            + FZCASO(1)+FZCASO(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          + TNCASO(1)+TNCASO(1))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C WRITE FORMAL STATEMENTS
 0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WRITE(CJ, 7012) TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF (INCAT . EQ.
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                 CALL HEADER
                                                                                                                                                                                                                                                       LU=B1AS+12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO TO 350
                                                                                                                                                                                                                                                                                                                                                                               CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    230 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   350 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RETURN
SUBROUTINE REPRT 12
                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                               9
                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                     75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01
                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105
```

	### COMMON BLOCK  ### COMMON BLOCK  ### CASO(2)   FYCASO(2)   ### FXUBSO   FYLUBSO   ### FXUBSO   FYSLSO(6)   FZELSO(6)   ### FXUBSO   FYSLSO(6)   FXUBSO(6)   ### FXUBSO   FXUBSO(6)   FXUBSO(6)   ### FXUBSO   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   ### FXUBSO   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   FXUBSO(6)   ### FXUBSO(6)   FXUBSO	* * * * * * * * * * * * * * * * * * * *
CUPANT FORCES COMMON BLOCK  MON /FORCESO / FXCASO(2) FYCASO(2) FYLUBSO FYTUBSO FYTUBSO FXTUBSO FXTUBSO FXTUBSO FXTUBSO FXTUBSO FXTUBSO FXTUBSO FXTUBSO FXAESO(6) FXAESO(6) FXAESO(6) FXAESO(6) FXAESO(6) FXAESO(6) FXAESO FXAESO FXAESO FXAESO FXAESO FXAESO FYAESO FXAESO FXAESO FXAESO FYDERSO FYDERSO FXAESO FXAESO FYDERSO(6) FXAESO FXAESO FXAESO FYDERSO	CUPANT FORCES COMMON BLOCK  MON /FORCESO / FXCASO(2) FYCASO(2) . FZCASO(2) .  FXTUBSO FYTUBSO FYTUBSO . FZTUBSO .  FXSLSO(6) FYAESO .  FXCHSO(3) FYCASO(3) . FZCHSO(6) .  FXCHSO(6) FYCHSO(3) . FZCHSO(6) .  FXCHSO(6) FYCHSO(3) . FZCHSO(6) .  FXCHSO(6) . FYRKSO(6) . FZERSO .  FXCHSO(6) . FYRKSO(6) . FZERSO .  FXCHSO(7) . FYCHSO(3) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(3) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(3) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(6) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(6) . FZCHSO(6) .  FXCHSO(6) . FYCHSO(6) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(6) . FZCHSO(3) .  FXCHSO(6) . FYCHSO(6) . FYCHSO(6) .  FXCHSO(6) . FYCHSO(6) . FYCHSO(6) .  FXCHSO(6) . FYCHSO(6) . FYCHSO(6) .  FXCHSO(7) . PRTFRO, PI1. PI2. PI3  AND / MASC / IDATE . HEADYAM . FYCHSO(6) .	* * * * * * * * * * * * * * * * * * *
MON / FORCESO / FXCASO(2) ; FYCASO(2) ; FZCASO(2) ; FXLUBSO   FYTUBSO   FYTUBSO   FYTUBSO   FYTUBSO   FYTUBSO   FYTUBSO   FYTESO   FYTESO	MON /FORCESO / FXCASO(2) : FYCASO(2) : FZCASO(2) :  FXSLSG(6)   FYSLSO(6)   FZRKSO(6)    FXRKSO(6)   FYRKSO(6)   FZRKSO(6)    FXAESO   FYRESO   FZRESO    FXAESO   FYRESO   FZRESO    FXAESO   FYRESO   FZRESO    FXDRTSO   FYRESO   FZRESO    FYDRTSO   FYRESO    FYDRTSO   FYRESO   FZRESO    FYDRTSO   FYRESO    FYDRTSO    FYDR	
FXTUBSO   FYTUBSO   FZTUBSO   FXTUBSO   FXSLSO(6)   FXSLSO(6)   FXSLSO(6)   FXSLSO(6)   FXRKSO(6)   FXRKSO(6)   FXRKSO(6)   FXRKSO(6)   FXRKSO(6)   FXRKSO(6)   FXRKSO(6)   FXRESO	FXTUBSO FYTUBSO FZESO(6) FZESO(6) FXSLSO(6) FXSLSO(6) FXAESO FXAE	
FXSLSG(6) FYSLSG(6), FZSLSG(6), FZRKSO(6) FXRKSO(6) FYCHSG(3) FZRKSO(6) FXAFSO FXAFSO FXAFSO FXAFSO FXAFSO FXAFSO FYSTSO SECRES  2 COMMON BLOCK MAXLINE FRORT / IREPTS(31) FYCHSG(3) FYCHSG(31) FYCHSG	FXSLSG(6) FYSLSG(6) FZRKSO(6) FZRKSO(6) FXRKSO(6) FXRKSO(6) FZRKSO(6) FXAESO FXAESO FZDRISO FXDRISO FXDRISO FXDRISO FXDRISO FZDRISO FXDRISO FXDRISO FZDRISO FXDRISO FZDRISO FXDRISO FZDRISO FZDRISO FXDRISO FZDRISO FYDRISO FZDRISO FYDRISO FZDRISO FYDRISO FZDRISO FYDRISO FY	
FXRKSO(6)   FYRKSO(6)   FZRKSO(6)   FXAESO   FZCHSO(3)   FYAESO   FZCHSO(3)   FXAESO   FZCHSO(3)   FXAESO   FXAESO   FZDRTSO   FXDRTSO   FZDRTSO   FZDRTSO   FZDRTSO   FZDRTSO   FZDRTSO   FZDRTSO   FYDRTSO   FZDRTSO   FYDRTSO	FYRKSO(6)   FYRKSO(6)   FZRKSO(6)   FZRKSO(6)   FXAESO   FZAESO   FZAESO   FZAESO   FZAESO   FZAESO   FXAESO   FYAESO   FZAESO   FXAESO   FYAESO	
FXCHSO(3)   FYCHSO(3)   FZCHSO(3)     FXAESO	FXCHSO(3); FYCHSO(3); FZCHSO(3); FXAESO FYAESO FZAESO FXDESO FYDESO FZAESO  2 COMMON BLOCK  AND / IREPORT / IREPTS(31) PRIFRQ, P11, P12, P13  ANEOUS DATA COMMON BLOCK  MAXLINE IERRIG LU  IDATE HEADSR HEADVAW HEADVIT  HEADSR HEADVET HEADVET  HEADVET HEADVET  WAXLINE IERRIG LU  IDATE HEADSR HEADVAW HEADVIT  HEADVAW HEADVIT  HEADVAW HEADVIT  INDO PRIMASS(2) PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIMOS PRIMOS PRIEMP( PRIMASS(2) PRIMOS PRIMOS PRIMOS PRIMOS PRIEMP( PRIMASS PRIMOS PRIMOS PRIMOS PRIMOS PRIMOS PRIEMP( PRIMASS PRIMOS PRI	
FXAESO FYAESO FZAESO  2 COMMON BLOCK  MON / IREPORT / IREPTS(31)  EGER  ANE OUS DATA COMMON BLOCK  ANALINE IERREG II. PI2. PI3  ANE OUS DATA COMMON BLOCK  HEADYAW HEADYAW HEADYIN  HEADYAW HEADYIN  FREPTYPE (5,31) IEVENIS(38) IMES(38)  IMMOC PRINGS(13) SAVINE  XACCEL(3) XYZ(3) XYZ(4)  XACCEL(3) XYZ(4) SAVINE  XACCEL(3) XYZ(4) SAVINE  XACCEL(3) X	FYAESO   FYAESO   FYDESO	
EXDRISO   FYDRISO   FYDRISO   FYDRISO	FXDRTSO	
2 COMMON BLOCK  MON /IREPORT / IREPTS(31)	2 COMMON BLOCK  ANEOUS DATA COMMON BLOCK  MON / IREPORT / IREPTS(31) , PRTFRQ.PI1.PI2.PI3  EGER	
### ### ##############################	MON / IREPORT / IREPTS(31) PRTFRQ, PI1, P12, P13  ANEOUS DATA COMMON BLOCK  MAXLINE IERREG LU  IDATE HEADALT HEADVEL  HEADSR HEADWAT HEADVEL  HEADSR HEADWAT BIAS  HEADVEL  BIAS  HEADVEL  SAVIINE  SAVIINE  NACCEL(3)  TAVIOR  HEADVEL  HEAD	* * * * * * * * * * * * * * * * * * * *
### ### ##############################	### ### ##############################	*****
ANEOUS DATA COMMON BLOCK  ANALINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IERFLG  LU  LU  IERFLG  LU  LU  IERFLG  LU  LU  IERFLG  LU  LU  LEADPIT  HEADPIT  HEADVEL(3)  TAVELOS  DRIGHT  HEADVEL  SAVIINE  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TRAUSO(193  TOTORA  TOTORA  IVPRIX  TYPRIX	ANEOUS DATA COMMON BLOCK  ANALINE  IEVLINE  IEVL	
### ##################################	AND MISC / IPAGECT(31) , LINECT(31) , IPRTCNT MAXLINE	
MAXEDT   MAXEDT   MAXENT   M	MAXE	
MAXLINE	MAXLINE	31)
TEVLINE   TERFELG     TEVLINE   HEADVAH     HEADSA	TEVLINE   TERRFLG	•
HEADALT	HEADSR	
HEADSR HEADVAW HEADVAM HEADVAT HEADVAM HEADVAT REPTYPE(5,31) PRTLNGT(2)   IEVENTS(38)   IEVENTS(38)   IEVENTS(38)   IAVDC   IA	HEADSR HEADVAW HEADROL HEADROL REPTYPE(5,31) PRINGT(2) IHEADER(24) IEVENTGT(2) IHEADER(24) IEVENTGT(3) ZVECT(3) XYZ(3) XACCEL(3) XYZ(3) XACCEL(3) XYZ(3) XACCEL(3) XYZ(3) XACCEL(3) XYZ(3) XACCEL(3) XYZ(2) REPTYPE BIAS PRINGHT PRINGHT PRINGSS ITON ROUTINE COMMON BLOCK TIME TRAJON TRA	-
HEADROL	HEADROL	•
HEADER(24)   PRTLNGT(2)   IEADER(24)   IEVENTS(38)     PRTMASS(2)   PRTLNDX   ZVECT(3)   XYZ(3)   XZ(3)   XZ	HEADER(24)   PRTLNGT(2)   HEADER(24)   IEVENTS(38)     PRTMASS(2)   PRTLNDX   ZVECT(3)   XYZ(3)   XZ(3)   XZ(	•
HEADER(24)   IEVENTS(38)   IMVDC	THEADER(24)   TEVENTS(38)   TAVECE	2) .
MVDC	MVDC	
EGER REPTYPE (3) . XYZ(3) . XACCEL(3) . YACCEL(3) . REPTYPE . BIAS . BIAS . REPTYPE . PRTMASS	EGER REPTYPE . YAZCEL(3) . XAZCEL(3) . XAZCEL(3) . XAZCEL(3) . XAZCEL(3) . XAZCEL(3) . YAZCEL(3) . YAZ	2) ,
EGER REPTYPE BIAS PRIMASS . YACGEL(3) . YA	XYZ(3)	-
EGER REPTYPE , BIAS , PACCEL(3) , PACCEL(3) , PRIWGHT , BIAS , BIAS , PRIWASS , LION ROUTINE COMMON BLOCK , DELTAT , TRAJOA(193) , TVCEGS(225) , QUATAG(193) , TVCEGS(225)	EGER REPTYPE , BIAS , PACCEL(3) , PACCEL(3) , PRIWGHT , BIAS , BIAS , PRIWASS	
FGER PRINTPE , BIAS  PRINGHT , PRIMASS .  TION ROUTINE COMMON BLOCK  TRAUSA(193) . TRAUDA(192) . T  TRAUSA(193) . TVEGS(225) . Q  QUATGA(193) . TVEGS(225) . Q  TRAUSA(193) . TVEGS(225) . Q  TRAUSA(193) . TVEUNX . T  TYST . TYTIX . T  TYPRIZ . TYPRIX . T  TYPRIZ . TYPRIX . T  TYPRIZ . TOTIX . T  TYPRIZ . TOTIX . T  TYPRIZ . T  TYP	PRIMGHT   PRIMASS   PRAJAC(193)	=
PRTMASS	PRTEMP   PRTMASS   PRTMASS   PRTMASS   PRTMASS   PRTMASS   PROUTINE COMMON BLOCK   PROUTINE   TIME   TIME   PRAUSA (193 )   TRAUSA (193 )   TVCEGS (225 )   PRAUSA (193 )   TVCEGS (225 )   PRAUSA (193 )   PROPASS   PROUTINE   PROU	•
TION ROUTINE COMMON BLOCK  MON /RKUTTA / TIME , TIMES , DELTAT , T  RAJAC(193) , TRAJAC(193) , TRAJAC(193) , T  RAJAC(193) , TRAJAC(193) , T  RAJAC(193) , T	TION ROUTINE COMMON BLOCK  MON /RKUTTA / TIME , TIMES , DELTAT , T	
TION ROUTINE COMMON BLOCK  MON /RKUTTA / TIME; TIME5; DELTAT  TRAJSA(193); TRAJOA(193); TOPPASS; TOPPAS	TION ROUTINE COMMON BLOCK  MON /RKUTA / TIME , TIMES , DELTA , TRAJSA(193) , TRAJSA(193) , TRAJSA(193) , TRAJSA(193) , TRAJSA(193) , TVCCS(225) , QUATSA(65) , QUATSA(65) , QUATSA(65) , DELTA , TVX , TVX , TVX , TV1 ,	
MON /RKUTTA / TIME , TIMES , DELTAT TRAUSA (193) . TRAUDA (193) . TRAUDA (193) . TVCEGS (225) . TRAUAC (193) . TVCEGS (225) . TRAUAC (193) . TVCEGS (225) . TNTSTP . TVX TVX TVX TVX TVX TVX TV13× TVFRIX TVFRIX TVPRIX TVPRIX TCVIX	MON /RKUTTA / TIME , TIMES , DELTAT TRAUSA (193) . TRAUDA (193) . TRAUDA (193) . TREGS (225) . TRAUAC (193) . TVCEGS (225) . TRAUAC (193) . TVCEGS (225) . TNTSTP . TVCEGS . TNTSTP . TVX . TNT . TVT X . TVT	• • • • • • • • • • • • • • • • • • • •
TRAJAC(193) TRAJAC(193) TRAJAC(193) TRAJAC(193) TVCEGS(225) QUATSA(65) QUATOA(65) TOTAL TRAJAC(193) TVCEGS(225) TRAJAC(193) TVCEGS(225) TRAJAC(193) TVCEGS(225) TV	TRAJAC(193) TRAJA(193) TRAJA(193) TRAJAC(193) TVCEGS(225) TRAJAC(193) TVCEGS(225) TNTSTP TYX TYX TXX TXX TXX TXX TXX TXX TXX TX TX TX T	*****
TRAUSAC (93)   TOCGOS (226)     TRAUSAC (93)   TOCGOS (226)     QUATSA (65)   QUATOA (65)     INTSTP   TOCASS   TOCASS     INTSTP   TOCASS     TOTAS   TOCASS	TRAUSAC (193)   TVCEOS (226)     QUATSA (65)   QUATOA (65)     INTSIP   IVX   IVX     IRX   IVX   IVX     IXX   IXX   IXV     IXX   IXX   IXV     IXX   IXX   IXX     IXX   IX	
		• •
		•
INTOINTS		•
	IKX IKOMX IK	•
INSTITUTE   INST	INDUMA   I	-
	IVPRIZX IVPRIX . IVPRIX IVPRIX ICYIX ICYIX	•
IVPRIZY IPPIX . IPPIX . ICVIX . ICVIX . ICVIX . ICVIX . ICVIX . ICVIX ICVIX	IVPRIZX IPPIX ICYIX	•
**************************************	TLANT I LANT I L	-
**************************************	***************************************	
SEAT/OCCUPANT COMMON BLOCK	********************************	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	SEAT/OCCUPANT COMMON BLOCK	***

```
232
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7000 FORMAT(/5x, "TIME".28x, "FORCES (5CS)", 42x, "MOMENTS (5CS)"/,
5x, "(5EC)", 30x, "(", A2, ")", 50x, "(", A2, "-", A2, ")",/,
28x, "x", 10x, "Y", 10x, "?", 9x, "RES", 21x, "L", 10x, "M", 10x, "N",
9x, "RES",/)
7010 FORMAT(1x, F9.4, 12x, 4(F9.2, 2x), 12x, 4(F9.2, 2x))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 + FXRKSO(1) , FYRKSO(1) , FZRKSO(1) , RESULT1, + TLRKSO(1) , TMRKSO(1) , TNRKSO(1) , RESULT2 9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT1 * SQRT(FXRKSO(1)*FXRKSO(1) + FYRKSO(1)*FYRKSO(1) + FZRKSO(1)*FZRKSO(1))

RESULT2 * SQRT(TLRKSO(1)*TLRKSO(1) + TMRKSO(1)*TMRKSO(1) + TNRKSO(1)*TNRKSO(1))
                                                                                                                                                                                          LU-BLAS+(12+RKTINDX)

IF (PRIFRO .LT. 0) GO TO 100

IF ((IEVENTS(S + RKTINDX) . EQ. 0) .OR.

(IEVENTS(I+RKTINDX) .NE. 0)) GO TO 9900

+ (REVENTS .EQ. 0) GOTO 100

IPRICNT(12+RKTINDX) = MOD (IPRICNT(12+RKTINDX)+1, PRIFRO)

IF(IEVLINE .NE. 0) GO TO 100

IF(IEVLINE .NE. 0) GO TO 100

IF(IPRICNT(12 + RKTINDX) .NE. 0) GO TO 9900
FIN 4.6+428
                                                            TNSLSO(6)
TNRKSO(6)
TNCHSO(3)
TNAESO
TNORTSO
                                                                                                                                                                                                                                                                                                                                                                                                                                      WRITE(LU,7000) PRTWGHT(PRTINDX), PRTWGHT(PRTINDX)
PRTLNGT(PRTINDX)
IF(PRTFRQ_LI_O) GGTO 9900
                                                                                                                                                                                                                                                                                                                                                                                           IF(LINECT(12 + RKTINDX) .LE. MAXLINE) GO TO 200
CALL HEADER
                                                            TLSLSQ(6), TMSLSQ(6), TLRKSO(6), TMRKSQ(6), TLCKSQ(3), TMCHSQ(3), TLCKSQ(3), TMAESQ TLORTSQ , TMDRTSQ ,
0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C WRITE FORMAT STATEMENTS
                                                                                                                                                                          INTEGER RKTINDX
  74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               I = RKTINDX
                                                                                                                                                                                                                                                                                                                                                                           CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RE TURN
  SUBROUTINE REPRT 13
                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                             9
                                                                                                                                                                                                                     65
                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                          75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
```

C SET/OCCUPANT FORCES COMMON BLOCK C SET/OCCUPANT FORCES COMMON BLOCK C C SET/OCCUPANT FORCES COMMON BLOCK C C COMMON FORCESO FXLSO(5) FYSLSO(6) F72LBSO FXCHSO(3) FYSLSO(6) F72LBSO FXCHSO(3) FYSLSO(6) F72LBSO FXCHSO(3) FYSLSO(6) F72LBSO(6) FYSLSO(6) F73LBSO(6) FYSLSO(6) FYSLSO(6) F73LBSO(6) FYSLSO(6) F	**************************************
COURCES AND MOMENTS REPORT   COURANT FORCES COMMON BLOCK   FYCASO(2)   FYCASO(2)   FYCASO(2)   FYCASO(2)   FYCASO(2)   FYCASO(2)   FYCASO(2)   FYCASO(3)   FYCAS	
DIMMON / FORCES COMMON BLOCK    FALLSO(6)   FYSLSO(6)   FZRSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	•
FYCASO(2)   FYCASO(2)   FYCASO(2)   FZCASO	***
FXTUSO   FYTUSO   F	
FX1USDSO, FYSLSO(6); FYSLSO(7); F	
FXALSU(G)   FYRKSO(6)   FZRKSO	
FXCHSO(3)   FYCHSO(3)   FZCHSO   FXESO   FYCHSO(3)   FZCHSO   FXESO   FYCHSO   FZCHSO   FXESO   FYCHSO   FZCHSO   FXESO   FYCHSO   FZCHSO   FYCHSO   FYCHSO   FZCHSO   FYCHSO   FZCHSO   FZCHSO   FZCHSO   FYCHSO   FZCHSO   FZCHSO   FYCHSO   FYCHS	
FACESO   FYCESOLES   FYCESO	
TAKESO	
	-
JN 2 COMMON BLOCK  VIEGE  LANEOUS DATA COMMON BLOCK  LANEOUS DATA COMMON BLOCK  LANEOUS DATA COMMON BLOCK  LEVILNE  LEVILNE  LEVILNE  LEVILNE  LEVERTYPE  LEVILNE  LEVENTS(3)  MAXING  MAXREPT  HEADSA  HEADSA  HEADSA  HEADSA  HEADWA  HEADWA	
JAMON / IREPORT / IREPTS(31)  JEGER  LANEOUS DATA COMMON BLOCK  LANEOUS DATA COMMON BLOCK  LANEOUS DATA COMMON BLOCK  IDATE  HEADSR  HEADSR  HEADSR  HEADSR  HEADSR  HEADYAW  HEADROL  REFTYPE (5,31)  IMVOC  PRIMASS(2)  YACCE(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XACCEL(3)  XAZ(3)  XACCEL(3)  XACCEL	
VIEGE  VIEGE  PRIFRO, P11, P12, P13  VIEGE  LANEOUS DATA COMMON BLOCK  LANEOUS DATA COMMON BLOCK  MAXLINE  IENECT(31)  MAXLINE  IENECT(31)  MAXREPT  IENECT(31)  MAXREPT  HEADRY  HEAD	****
TEGER  PRTFRO, PI1, PI2, PI3  LANEOUS DATA COMMON BLOCK  MAXLINE  IEVLINE  IEVLINE  IEVLINE  IERREG  IMADOR  HEADWGT  REPTYPE  REP	
LANEOUS DATA COMMON BLOCK  LEANEOUS DATA COMMON BLOCK  MAXLINE  IEVLINE  IEVLINE  IEVLINE  IEVLINE  IERRELG  IEVLINE  IERRELG  IERRELG  IERRELG  IERRELG  IERRELG  IERRELG  IERRELG  IMADOR  REDTYPE  REPTYPE  REPTYPE  REPTYPE  REPTYPE  REPTYPE  REPTYPE  RACCEL(3)  YACCEL(3)  REPTYPE  REPTYP	
TEAL INE	*****
MAXRED   MAXRED   MAXRED	***
######################################	31
FEVLINE   FERRECT	EAYE CAT
HEADSR   HEADVAW	
HEADROL HEADWGT HEADWG	HEADVEI
+ HEADROL   HEADWOT   + FRETYPE(5,31)   PRTLNGT(2)   + FREDYPE(24)   IEVENTS(38)   + TANDOC   PRTINDX   - TANDOC   PRTINTX   - TANDOC   PATINTX   - TANDOC   PRTINTX   - TANDOC   PRTINTX   - TANDOC   - TANDOC   PRTINTX   - TANDOC   PRTINTX   - TANDOC   PATINTX   - TANDOC   PRTINTX   - TANDOC   - TANDOC   PRTINTX   - TANDOC	HEADDIT.
### ### ### ### ### ### ### ### ### ##	81 A
HEADER(24)   IEVENTS(38)	PRIMGHT(2)
MANDER	T1MES(3R)
PRIMASS(2) , PRIINDX 2VECT(3) , XYZ(3)  ***ACCEL(3) , YACCEL(3)  INTEGER	PRIEMP(2)
+ XACCEL(3) , XYZ(3) + XACCEL(3) , YACCEL(3) - YACCEL(3) - YACCEL(3) - YACCEL(3) - YACCEL(3) - RIAS	
INTEGER   REPTYPE   BIAS   B	SAVTIME .
INTEGER   REPTYPE   BIAS   BRINGHT	ZACCEL(3)
PRIMGHT   PRIMASS   PRIM	PRTLNGT .
PRTEMP  PRIMASS  INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTA / IIME , TIMES , DELTAT  PRAUSA(193) , TRAUDA(193) , TRAUDA(193	
INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTA / TIME , TIMES DELTAT  TRAUSA(193) , TRAUDA(193) , TRAUDA(193) , TRAUDA(193) , TRAUDA(193) , TVCEOS(225) , OUATSA(65) , OUATSA(65) , OUATSA(65) , OUATSA(65) , TVX	PRTINDX
COMMON / RKUTTA / TIME , TIME5 DELTAT  + TRAJSA(193) , TRAJDA(193)  + TRAJAC(193) , TVCEQS(225)	
TRAJAC(193)   TRAJAC(193)   TRAJAC(193)   TRAJAC(193)   TVCEQS(225)   QUATSA(65)   QUATGA(65)	***************************************
TYCEOS(225)	, (c)
TYPE OUNTED STATE OUT	(A) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C
I PCPASS I YX I XX I X SUMX I Y 1 X X X X X X X X X X X X X X X X X X	QUATE (02)
415 114X 114X 114X 114X 114X 114X 114X 1	QUALAC(65) .
I V I V I I V I V	TATANO.
. 1 1 1 X	Y FXX
TITALIA IYPRIX IZX IPYIX	IKPASSA
2X IPVIX	
That's	
******	. X1 14d
ICYLA . ICYLIA	

65

TLSLSO(6), TMSLSO(6), TNSLSO(6), TLRKSO(6), TNRKSO(6), TLCHSO(3), TMCHSO(3), TNCHSO(3), TNAESO, TNAESO, TNAESO, TMDRTSO, TMDRTSO, TMDRTSO

LU = BIAS+19
IF (PRIFRQ .LT. 0) GD TD 100
IF((REVENTS(33) .EQ. 0) .AND. (IEVENTS(34) .EQ. 0)) .OR.
IF(((IEVENTS(33) .EQ. 0) .AND. (IEVENTS(36) .NE. 0)))
+ ((IEVENTS(35) .NE. 0) .AND. (IEVENTS(36) .NE. 0)))

IF (PRTFRQ, EQ. 0) GDTO 100
IPRTCNT(19) \* MOD (IPRTCNT(19)+1, PRTFRQ)
IF(IEVLINE .NE. 0) GD TO 100
IF(IPRTCNT(19) .NE. 0) GD TO 9900

CONTINUE 8

2

IF(LINECT(19) .LE. MAXLINE) GO TO 200 CALL HEADER

WRITE(LU, 7000) PRIWGHT(PRTINDX), PRIWGHT(PRTINDX)
PRILNGT(PRTINDX)
IF(PRIFRQ\_LT\_0) GDT0 9900

73

200 CONTINUE
RESULTI-SQRT(FXDRTSO\*FXDRTSO+FYDRTSO\*FYDRTSO+FZDRTSO\*FZDRTSO)
RESULTZ-SQRT(TLDRTSO\*TLDRTSO+TMDRTSO\*TMDRTSO+TNDRTSO\*TNDRTSO)
WRITE(LU,7010) TIME

80

+ FYDRTSO FYDRTSO TLINETSO THORTSO TOURTSO CONTINUE

, RESULT1 , RESULT2

. FZDRTSO . TNDRTSO

9900 CONTINUE

90

95

5-235

C DROGUE FORCES AND MOMENTS REPORT C C	**************************	••••••	•••••	•	
C SEAT/OCCUPANT FORCES (	IENTS REPORT		·		
/ CVEUQCE/ NUMBER	COMMON BLOCK	•		• •	
	FXCASO(2)	FYCASO(2) . FZCASO(2	F2CASO(2)	•	
*	FXTUBSO		BSO		
+			FZSLS0(6) .		
•	•	•	FZRKSO(6) .		
+	(3)	(3)	FZCHS0(3) .		
•	•	•			
		110X   SUZ   .   ZUX   SUZ   .   .   .   .   .   .   .   .   .	*******************************	•	
	Š		;	• 9	
**************************************	(10:01C(31)	DOTED DI DIO DIO	:		
INTEGER	PRIFRO, PI1, PI	,P12,P13			
C	***********	***********	************	••••	
C MISCELLANEOUS DATA COMMON BLOCK	MMON BLOCK			• • •	
COMMON /MISC	•	. LINECT(31	. IPRTCNT(31		
+	MAXL INE	MAXREPT	MAXEVNT		
*	I EVL INE	, JERRFLG	. re		
•	IDATE	, HEADALT	. HEADVEL		
*	HEADSR	. HEADVAW	HEADPIT	-	
+	HEADROL	•	BIAS	•	
•	KEP (YPE (5, 31)	•	TIMEN (2)	•	
+ +	IMEAUER (24)	, IEVENIS(38)	DDTFMD(28)		
• •	PRIMASS(2)	PRIINDX		•	
•	ZVECT(3)	XYZ(3)	SAVTIME		
*	XACCEL(3)	, YACCEL(3)	, ZACCEL(3)		
INTEGER	REPTYPE	. BIAS	, PRTLNGT		
<b>*</b> *	PRIMERI	PRIMASS	XONITAG		
	**********	· :	************	****	
INTEGRATION ROUTINE	COMMON BLOCK				
COMMON /PKULTA	TIME TIMES	DELTAT	TRA (50/ 193)		
	. ¥	TRAJOA( 193)	TRAJCH(97.3)		
•	TRAJAC( 193)	, TVCEOS(225)	QUATS0(65)		
•	QUATSA(65)	. QUATOA(65)	, OUATAC(65)		
•	INTSTP	. IPCPASS	. IRKPASS .		
<b>+</b>	IPOINTS	. 14x	IVPRX		
<b>*</b> •	× 2	XMOSAI .	, IKPASSX		
	×: 1	Y DOLX	. 1.127 1.70011X		
	1 V P Q 1 2 X	10/11	IPVIIX		
•	ICVIX	. ICVI 1X	IREIN		
• • • • • • • • • • • • • • • • • • • •	**********	************	ě	****	

```
SUBROUTINE REPRIZO
```

```
7000 FDRMAT(/5x, "TIME", 17x, "FORCES (SCS)", 28x, "MOMENTS (SCS)", 29x, +"POSITION (EFCS)", 5x, "(SEC)", 19x, "(",A2,")", 36x, "(",A2,",")A2,", 18x, "X2, ", 19x, "(",A2,")", 18x, "RES", 10x, "L", 9x, +", 10x, "R, 10x, "L", 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT1,
RESULT2,
RESULT3
TNSLSO(6)
TNRKSO(6)
TNCHSO(3)
TNAESO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF(LINECT(20) .LE. MAXLINE) GO TO 200
CALL HEADER
WRITE(LU,7000) PRTWGHT(PRTINDX) , PRTWGHT(PRTINDX)
+ PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
IF(PRTFRQ .LT. 0) GOTO 9900
                                                                                                                                                                                                                                                                                                                                                         GO TO 9900
                                                                                                                                                                                                                             IF (PRTFRQ .LT. 0) GD TD 100

IF((IEVENTS(19) .EQ. 0) .DR.

(TEVENTS(24) .NE. 0)) GD TD 99(

IF (PRTFRO .EG. 0) GDTD 100

IPRTCNT(20) = MDD (IPRTCNT(20)+1, PRTFRQ)

IF(IEVLINE .NE. 0) GD TD 100

IF(IPRTCNT(20) .NE. 0) GD TD 9900

OCCUMINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
FN
    TMSLSO(6) . TMRKSO(6) . TMCHSO(3) . TMAESO . TMAESO . TMDRTSO .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            X = FXCHSO(1) + FXCHSO(2)

Y = FYCHSO(1) + FYCHSO(2)

Z = FZCHSO(1) + FZCHSO(2)

FL = TLCHSO(1) + TLCHSO(2)

FM = TMCHSO(1) + TMCHSO(2)

FM = TRAJCH(2,1) + TRAJCH(2,2)

PX = TRAJCH(3,1) + TRAJCH(3,2)

PX = TRAJCH(4,1) + TRAJCH(4,2)

RZ = TRAJCH(4,1) + TRAJCH(4,2)

RESULT = SQRT(FL*FL + FW*FM + FW*FN)

RESULT = SQRT(FL*FL + FW*FW + PX*PZ)
    TLSLSO(6) .
TLRKSO(6) .
TLCHSO(3) .
TLAESO .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINECT(20) * LINECT(20) + 1
9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WRITE(LU, 7010) TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RE TURN
                                                                                                9
                                                                                                                                                                                                                                                                                                                         65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
```

<b>* * *</b>	COMMON / LORGE / LEASO(2) , MECASO(2) , TATLUSSO , TATLUSSO , TATLUSSO , TATLSSO(6) , TATLSSO(3) , TATLSSO(4)	TNTUBSO . TNTUBSO . TNTUSO 6) . TNRKSO (6) .
Cassessessessessessesses	TLAESO TMAESO . TLORISO TMDRISO . ************************************	TNAESO TNDRTSO
COMMON		**************************************
LU-BIAS+21 LU-BIAS+21 IF (PRIFRO IF (PRIFRO IP (PRIFRO		
15 (1FVLINE 150 CONTINUE 15 (LINECT (2 CALL HEADER	21) .NE.	
IF (PRIFR 200 CONTINUE IF (EVEN X = FXCH Y = FYCH	0 .LT. rs(28) so(3) so(3)	
Z = F2CH50 L = TLCH50 M = TMCH50 N = TNCH50 GDT0 400		
300 CONTINUE X = FXCH Y = FYCH 2 = F2CH L = TLCH	INUE FXCHDA(3) FYCHDA(3) FZCHDA(3)	
M = 1MCH N = 1NCH 400 CONTINUE RES1 = 5 RES2 = 5	* TMCHOA(3)  = TMCHOA(3)  NTINUE  SI = SORT(X*X + Y*Y + Z*Z)  S2 = SORT(L*L + M*M + N*N)	
WRITE(LU,7010) TIME LINECT(21) = LINECT 9900 CONTINUE RETURN	(21) + t	Z, RES2
C WRITE FORMAT C+++++++ 7000 FURMAT(/	C WRITE FORMAT STATEMENTS  C.***********************************	MOMENTS (SCS)"/,

5-240

C TVC MICROPROCESSOR DATA REPORT			•	
SECTION 2 COMMON BLOCK COMMON / IREPORT / IREPTS(31) INTEGE	PRIFRO, PI1, PI2, PI3	PRIFRQ, PI1, PI2, PI3		
COMMON BLOC	* * * * * * * * * * * * * * * * * * * *		* * * * * * * * * * * * * * * * * * * *	
COMMON /ITVCIN / ITVC , MPHI + RKANG RKANG REAL MPHI , MPSI	MPHI MPSI . PITCHRL SMPLRAT, MPSI MTHE	. MTHE AT, TVCDLAY	A Y .	
: :		: :	***************************************	
	F		: :	
`	MAXBEDI			•
	FEDERIC	•	111	•
+ 10ATE	HEADALT	•	HEADVEL	
HEADSP	HEADYAN	•	HEADP11	•
1080F3H	HEADWGT	•	BIAS	
2	31) PRIMING (2)	(6)	PRIWGHT(2)	
24	 :	(38)	TIMES (38)	
•	IMVDC	•	PRTEMP(2)	-
+ PRIMASS(2)	. PRTINDX	•	PK2VEL	-
+ ZVECT(3)	, XY2(3)	•	SAVTIME	•
+ XACCEL(3)	. YACCEL(:	3)	ZACCEL(3)	
INTEGER REPTYPE	. BIAS	٠	PRTLNGT	•
+ PRTWGHT + PRTEMP	PRTMASS	•	PRTINDX	
C	• • • • • • • • • • • • • • • •	:	*****	:
:	*******************	*******	• • • • • • • • • • • • • • • • • • • •	:
COMMON /MOMARMS /				
+REFLNSO , REFLNOA , REFLNSA	.URX(6) .UI	.URY(6)	.URZ(6) .	
5	XSSORK(6), Y	(9)	. ZSSORK(6).	
SACCODE VCCODE 75CD	X SSOLDE V		75501 PF	
ACCOMOR 2000			7550R01	
Vectors (6) 2000cb(6)	•	040000		
ò	•		LARCORC.	
*XSSCSAC , YSSCSAC , ZSSCSAC	. XSSUSKP	.YSSUSKP	ZADMOE	
V604000 7004000	(c)aydaax (c)aydax		70004017	
(2) 2000 (E)	XCOCD(2)		, 28 KUAF (2).	
COORDAN.	•	VEROAC	76 SDAC	
A YOUNG TANGOOD AND AND AND AND AND AND AND AND AND AN			7550AC	
and and an analysis	٠,			
, decent, o	יייייייייייייייייייייייייייייייייייייי		. CARSON.	
YKKSB	5	5	. 2550cm(3).	
•	AASOAC .T.	. TASUAC	ANDORUM.	
+ ARSOAC TRICAC		L LANG	7 1404	

	COMMON /RKUTTA	/ TIME , TIMES   TRAUSA(193)   TRAUSA(193)   OUATSA(65)   INTSTP   INTSTP   INTSTP   INDINIS	ın	TRAJSO(193) TRAJCH 97.3) OUATSO(65) QUATAC(65) TRKPASS		
ŏ		IAPRICK I KK I V I 3X I V I 3X I CV I X	IKTIX IKTIX IYPRIX ICVIIX	INTINA IMPASSA IVIZA IVPRITA IREIN	•	
ပပိ	C THRUST VECTOR CONTROL VARIABLES COMMON BLOCK  COMMON/TVCVRB / ITVFFLG . CMPVAL . D3(3)  C29 . C30 . C31  + DTH(3,2) . ANGR(3)	40L VARIABLES CI 11VCFLG . CI C29 . C	COMMON BLOCK CMPVAL , D3(3) C30 , C31	. RKTCMND(3).	• •	
	LU-81AS+22 IF (PRIFRG LT. 0) GO TO 100 IF (ITVC .NE 1 .OR.	0) GD TD 100 I OR. :NTS(6) EQ. 0	LT. 0) GO TO 100 HE 1 OR. FEVENTS(6) EQ. 0 . OR. 1EVENTS(12)	.NE. O)		
	1 F (PRTFRQ EQ. 0) GOTO 100  IPRICNI(22) = MOD (IPRICNI(2  IF (IPRICNI(22) .NE. 0) GO TO 100  IF (IPRICNI(22) .NE. 0) GO TO 100  OCCUPANTINUE	LD 10 3500 IF (PRIFEQ .EQ. 0) GOTO 100 IPRICNI(22) = MOD (IPRICNI(22)+1, PRIFRQ) IF (IEVLINE .NE. 0) GO TO 9900 CONTINUE	)+1, PRTFRQ) 9900			
	1F (LINECT(22) .LE. MAXLINE CALL HEADER WRITE (LU,7000) 1F(PRTFRQ .LT, 0) G010 9900 200 CONTINUE	1F (LINECT(22) LE. MAXLINE) GD 1D 200 CALL HEADER WRITE (LU,7000) 1F(PRTFRQ LT, 0) GDID 9900 GONTINGE (AL) 2010) 11ME	60 10 200			
01	## ( LD ) / O   O   O   O   O   O   O   O   O   O	1) ) MND(1) 22) + 1	URY(1) . URZ(1) D3(2) . D3(3) RKTCMND(2) , RKTCMN	UR2(1) 03(3) RKTCMND(3)		
	C WRITE FORMAT STATEMENTS  C WRITE FORMAT STATEMENTS  7000 FORMAT (//5x, *TIME**, 17%, *ROCKET THRUST LINE*, 20%, *OIRECTII  7010 FORMAT (1x, F9 4, 31, 10%, 31, 10%, 4)))	### 1	RETURN  E FORMAT STATEMENTS  FORMAT (/5X, "TIME", 17X, "ROCKET THRUST LINE" 20X, "DIRECTION " COSINES", 23X, "ROCKET GIMBALLING COMMANDS", /,5X, "(SE FORMAT (1X FO A 3/10X 3/F) O A 3/10X	STATEMENTS  /5X, "TIME", 17X, "ROCKET THRUST LINE", 20X, "DIRECTION ", "COSINS", 'SX, "(SEC)"/)	5	

C RAIL FORCES AND MOMENTS REPORT	ENTS REPORT		•
0			
SE	S COMMON BLOCK		
		:	• • • • • • • • • • • • • • • • • • • •
COMMON /FORCESO /	FXCASO(2) .		50(2) .
*			. 058
+	•	•	. (9)
•	•		. (9)0
+	(3)	(C	(3)
*	•	-	. 00
•	-	٠	
*	:	• • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • •
C SECTION 7 COMMON BLOCK			
	•		
COMMON / INAIL		•	, Nalbra
<b>+</b>	•	•	. YK10k
•	XPOSKRE YP	-	
*	٠		•
•	8(6),	SB(6),	(9)
REAL	KXSB . KY	KYSB , MUSB	
(	************	*************	***************
C SECTION 2 COMMON BLOCK	LOCK		•
	*************	• • • • • • • • • • • • • • •	***************
COMMON /IREPORT / IREPIS(31)	/ IREPIS(31)	IREPTS(31) PRIFRQ, PI1, P12, P13	2.P13
INTEGER	PRIFRO, PI 1, PI	2.PI3	•
		***********	***************
C MISCELLANEOUS DATA COMMON BLOCK	COMMON BLOCK		•
			****
COMMON /MISC	/ IPAGECT(31)	. LINECT(31)	. IPRICNI(31) .
*	MAXI INE	, MAXREPT	. MAXEVNT
+	I E VL I NE	, TERRFLG	01 .
•	IDATE	. HEADALT	. HEADVEL
+	HEADSR	, HEADYAW	, HEADPIT ,
*	HEADROL	. HEADWGT	BIAS
+	REPTYPE (5, 31)	PRTLNGT(2)	PRTWGHT (2)
•	THE ADER (24)	IFVENTS (38.)	TIMES(38)
+		IMVDC	PRIFMP(2)
•	DDTMASS(2)	PDTIMIX	DKZVEI
	2VECT(3)	COLLAN	CAVITME
- 4	XACCEL (9)		740061(2)
03031141	0001000	9110	DOTATION
INIEGER	REPLIPE	. B. A. S	. PRILNG!
•	PKIWCHI		
	PRIEMP	. PRTMASS	. PRTINDX
		*************	**************
C INTEGRATION ROUTINE	COMMON BLDCK		•
:		*****	
COMMON /RKU. LA	/ TIME . TIMES	. OELTAT	TRAJSO(193)
•	TRAJSA( 193)	. TRAJOA(193)	TRAJCH(97,3)
+	TRAJAC(193)	. TVCEQS(225) .	QUATS0(65) ,
•	QUATSA(65)	, QUATOA(65) ,	QUATAC(65) .
*	INTSTP	. IPCPASS .	IRKPASS .
•	IPC NTS	××I	LYPRX

```
243
 PAGE
 53
 09.41
83/11/07
                                                                                                            C TORQUE SEAT/OCCUPANT COMMON BLDCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C WRITE FORMAT STATEMENTS
                                                                                                 7000 FORMAT(/5x,"TIME",28x,"FORCES (SCS)",42x,"MOMENTS (SCS)",

5x,"(SEC)",30x,"(",42,")",50x,"(",42,")",/

28x,"x",10x,"Y",10x,"2",9x,"RES",21x,"L",10x,"M",10x,"N",

+ 9x,"RES",/)

7010 FORMAT(1X,F8.4,12x,4(F9.1,2x),12x,4(F9.1,2x))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , RESULTI,
, RESULT2
 4 6+428
                                                      IYPRI 1X
                                                                    IPY I 1X
                                                                                 IREIN
                                                                                                                                    CALL HEADER
WRITE(LU, 7000) PRTWGHT(PRTINDX), PRTWGHT(PRTINDX)
PRTLNGT(PRTINDX)
IF(PRTFRQ LT. 0) G0T0 9900
                                                                                                                                                                                                                                       IU-BIAS+23

IF (IEVENIS(5) NE 0) GD TO 9900

IF (PRTFRQ .LE 0) GD TO 100

IPPRCNI(23) = MOD (IPRCNI(23)+1, PRTFRQ)

IF (IEVLINE .NE 0) GD TO 100

IF (IPRICNI(23) .NE 0) GO TO 9900
                                                                 IPYIX
ICYI 1X
                                                      IYPRIX
                                                                                                                                                                                                                                                                                                                         CONTINUE
IF (LINECT(23) LE. MAXLINE) GD TO 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT1 = SQRT(X+X + Y+Y + 2+Z)
RESULT2 = SQRT(FL+FL + FM+FM + FN+FN)
WRITE(LU,7010) TIME ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rt , fM
LINECT(23) = LINECT(23) + 1
CONTINUE
                                                                    I YPRI 2X
                                                                                   ICYIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (NSLBKS .EQ. 0) K#4
DO 250 I#1,K
X = X + F XSL SO(1)
X = Y + F YSL SO(1)
Z = Z + F ZSL SO(1)
FL = FL + TL SL SO(1)
FM = FM + TMSL SO(1)
FN = FN + TNSL SO(1)
 OPT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                       X=Y=Z=FL=FM=FN=O.O
K=NSLBKS
 74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CONT I NUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9900 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                            CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RE JURN
 SUBROUTINE REPR'23
                                                                                                                                                                                                                                                                                                                                                                                                            200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   250
                                                                                                                                                                                                                                                                                                                            8
                                                                      9
                                                                                                                                           65
                                                                                                                                                                                                             70
                                                                                                                                                                                                                                                                                                                                                       90
                                                                                                                                                                                                                                                                                  75
                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

*******			
C C SEAT/OCCUPANT AERODYNAMIC FORCES AND MOMENIS REPORT	INAMIC FORCES AND	MOMENTS REPORT	•
C DCCUPANT ALONE FORCES COMMON BLOCK	S COMMON BLOCK	***************************************	:
COMMON /FORCEDA /	FXCHOA(3)	FYCHDA(3), FZCHDA(3) FYAFDA FZAFDA	)A(3) .
	***********	**********	
C SEAT ALONE FORCES COMMON BLOCK	;		•
COMMON /FORCESA / FXAESA	/ FXAESA . FY	FYAESA , FZAESA	• • • •
	******		******
C SEAT/OCCUPANT FORCES COMMON BLOCK	COMMON BLOCK	***	*
COMMON /FORCESO	/ FXCASD(2) , FY	2) . F	
+	FXTUBSD .		, 058
+			. (9)05
+	•	- -	. (9)0
+ +	FXCHSO(3), FYC	FYCHSO(3), FZCHSO(3)	. (2)
. •			. 051
C	٠	***	********
C SECTION 2 COMMON BLOCK			
**************************************	: :	PRIFRO PI	1.p12.p13
INTEGER	PRTFRQ,PI1,P12,P13	, PI3	·
C.************************************	************	• • • • • • • • • • • • • •	*******
C MISCELLANEOUS DATA COMMON BLOCK		***************************************	
COMMON /MISC		LINECT (31)	IPRICNI(31)
+	MAXLINE	MAXREPT	MAXEVNT
+	I E VL I NE	, JERRFLG	
•	IDATE	. HEADALT	, HEADVEL
+	HEADSR	. HEADYAW	HEADPIT .
•	HEADROL	HEADWGT	. BIAS
•	REPTYPE (5,31)	. PRTLNGT(2)	PRIWGHT(2)
<b>*</b> •	IHEADER(24)	. TEVENIS(38)	nortemp( 2)
· •	PRIMASS(2)	XUNITOG	
+	ZVECT(3)	XYZ(3)	SAVTIME
•	XACCEL(3)	, YACCEL(3)	ZACCEL(3)
INTEGER	REPTYPE	, BIAS	. PRTLNGT .
+ +	PRIWGHT	PPTWASS	X UNI LOG
	:	****	
C INTEGRATION ROUTINE COMMON BLOCK	COMMON BLOCK		
	/ TIME , TIMES ,	,	TRAUSO(193) .
+	TRAUSA( 193)	TRAJOA(193)	1RAJCH(97,3) .
+	TRAJAC( 193)	TVCEQS(225)	QUAT50(65)
•	QUATSA(65)	QUATOA(65)	OUATAC(65)
+	. AISINI	I PCPASS	LKKYASS

```
PAGE
83/11/07, 09.41 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C AERODYNAMICS INFORMATION COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C TORQUE SEAT/OCCUPANT COMMON BLOCK
C. COMMON /TORQSO / TLCASO(2) , TMCASO(2) , TNCASO(2) , TNCASO(2) , TNCASO(2) , TNCASO(6) , TLCASO(6) , TNCASO(6) , TLCASO(6) , TLCASO(6) , TNCASO(6) , TLCASO(6) , TNCASO(6) , TNCASO(6) , TLCASO(6) , TLCASO(6) , TNCASO(6) , TLCASO(6) , TLCASO(6) , TNCASO(6) , TLCASO(6) 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C******* STATE FORMAT STATEMENTS
                                                                                                                                                                                                                                          CARACTER DECUPANT ALONE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                           SAMACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULTI=SORT(FXAESO+FXAESO + FVAESO+FVAESO + FZAESO+FZAESO)
RESULT2=SORT(TLAES3+TLAESO + TMAESO+TMAESO + TNAESO+TNAESO)
WRITE(LU, 7010) TIME
FIN 4 6+428
                                                                                                                                 IYPRIIX
                                                                                                                                                                 IPYI1X
                                                                                                                                                                                                          IREIN
                                                                                                                                                                                                                                                                                                                                         COMMON /TOROGA / TLCHOA(3), TMCHOA(3), TNCHOA(3)
TLAEDA , TMAEOA , TNAEOA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WRITE(LU,7000) PRTWGHT(PRTINDX), PRTWGHT(PRTINDX).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TNDRTSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . FZAESO
. TNAESO
. SOVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LU = B1AS + 24

IF(IEVEN'S(2B) .NE. 0) GDTO 9900

IF (PRTFRQ .LE. 0) GD TO 100

IPPTCNT(2A) * MOD (IPPTCNT(2A)+1, PRTFRQ)

IF(IEVLNE .NE. 0) GD TO 100

IF(IPRICNT(2A) .NE. 0) GDTO 9900
                                                                                                                                        IYPRIX
                                                                                                                                                                                                          ICY 11X
                                                                                                                                                                 VIV91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . TMDRTS0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . DABETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOBETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF(LINECT(24) .LE. MAXLINE) GOTO 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . FYAESO . 1MAESO . SOBETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . CYSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CXDA . CYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IF (PRIFRQ LT. 0) GOTO 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                     C TORQUE SEAT ALONE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TLAESO
TLDRTSO
                                                                                                                                                                           I VPRI 2X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMON / AEROCFS / DAALPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SAALPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOALPH
                                                                                                                                                                                                             XCA IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I INECT (24) * LINECT (24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CXSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TLAESO
SOALPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FXAESO
      0P1 = 1
   74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CALL HEADER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO 10 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9900 CONTINUE
   SUBROUTINE REPRI24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                              ၀
                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
```

SUBROUTINE REPRT24	REPRT24	74/74 OPT=1	OP F = 1	FTN 4.6+428	83/11/07. 09.41.53	PAGE	246
51	7000 FORMAT (	[(/5x,*T	// SX, TIME: 20X; "FORCES (SCS)", 29X; "MOMENIS (SCS)", 26X;	ENTS (SCS) ", 26X,	: ,		
	+ AEKUI + 1) 1, 2 + 17 1, 8)	JYNAMICS 1X, "ALPHA	(WCS)"/, DX, "(SEC)", 2ZX, "(", AZ, ")  M BETA VEL MACH",  MACH",  MACH",	7, 197, " , 182, " , 197, " /	·		
20	+3X, "( 7010 FDRMAT	. A2. "-SE	+3X, *(", A2, "-5EC)*, & ", NO, ", )	2X,F8.2))	•		
	END						

	126				
O	• • • • • • • • • • • • • • • • • • • •				
C OCCUPANT ALONE AERODYNAMIC FORCES AND MOMENTS REPORT C. OCCUPANT ALONE FORCES COMMON BLOCK	DYNAMIC FORCES	PANT ALONE AERODYNAMIC FORCES AND MOMENIS REPORT ####################################		* * *	
C*************************************	/ FXCHDA(3)	FYCHOA(3) FZCHOA(3)	**************************************	•	
<b>.</b>	FXAEOA	FYAEDA . FZAEDA	V.		
C SEAT ALONE FORCES COMMON BLOCK	OMMON BLOCK	ALONE FORCES COMMON BLOCK		* *	
0	************	•	*************	• • •	
COMMON /FORCESA / FXAESA	/ FXAESA .	FYAESA , FZAESA	<b>Y</b> S		
C SEAT/OCCUPANT FORCES COMMON BLOCK	S COMMON BLOCK	• • • • • • •		* * *	
			**************************************	•	
COMMON /FUNCESO /	FXCASO(2) . FXTUBSO .		FZCASO(2) . FZTUBSO .		
+		•	FZSLSO(6) ,		
<b>4</b> •	٠		FZRKSO(6)		
• •	EXAESO 3)	FYCHSU(3) . FZCHSU	F 2CHSU(3) .		
• •	٠.	٠.	. 081		
C. * * * * * * * * * * * * * * * * * * *	:	•	*************	• •	
C SECTION 2 COMMON BLOCK	ОСК	ION 2 COMMON BLOCK		• 1	
COMMON / IREPORT / IREPIS(31)	/ IREPTS(31)	PRIFRO PIT PIZ PIZ	2.P13		
INTEGER	PRTFRQ, P11, P12, P13	12.PI3			
**************************************	***************************************	在全年的日本有效的基本的基本的基本的基本的基本的基本的基本的基本的基本的基本的基本的基本的基本的	*****	**	
C. M. SCELLANEOUS DAIA COMMUN BEUCK		ELLANEUDS DAIA COMMUN BLUCK	*****		
COMMON /MISC	/ IPAGECT(31)	, LINECT(31)	. IPRTCNT(31)		
•	MAXL INE	. MAXREPT	, MAXEVNT		
•	I E VL I NE	. IERRFLG	n.		
+	IDATE	. HEADALT	, HEADVEL	•	
<b>.</b>	HEADSR	HEADYAW	HEADPIT		
<b>+</b> ·	HEADROL	٠	, BIAS		
•	REPLYPE(5,31)	•	PRIWGHI(2)	•	
	INCADER (24)	. 1EVENIS(38)	DOTEMO 23	•	
• •	DDTMASS(2)	MILLO	DVZVEI	•	
•	ZVECT (3)	. xYZ(3)	SAVTIME	•	
+	XACCEL(3)	, YACCEL(3)	ZACCEL(3)		
INTEGER	REPTYPE	. BIAS	PRILNGI		
•	PRIWGHT	-			
	PRTEMP	PRIMASS	, PRTINDX	:	
GRATION ROUTINE	COMMON BLOCK			• •	
•	/ TIME , TIMES	, DELTAT	TRAJS0(193)	•	
•		. TRAJOA(193)	TRAJCH(97,3)		
•	TRAJAC( 193)	. TVCEQS(225)	QUATS0(65)		
+ •	OUATSA(65)	. OUATOA(65)	QUATAC(65)		
•	AISINI AISINI	I PCPASS	IKKPASS .		
4 .	SINIDAI	. 177	I YPRX		
•			200000		

UPANT ALONE COMMON BLOCK    TORGOA	•	× 1 × 21	X 1 X 2 1		TOPIN
C COMMON / TORGOA / TLCHOA(3) TINCHOA(3) TINCHOA(3)  - COMMON / TORGOA / TLCHOA(3) TINCHOA(3) TINCHOA(3)  - COMMON / TORGOA / TLCASA TIMAESA TINAESA  C COMMON / TORGOA / TLAESA TIMAESA TINAESA  C COMMON / TORGOA / TLCASG(2) TINAESG(3) TINCHSG(3) TILCHSG(4) TINCHSG(3) TINCHSG(3) TINCHSG(3) TILCHSG(4) TINCHSG(3) TINCHSG(3) TINCHSG(3) TILCHSG(4) TINCHSG(3) TINCHSG(4) TINCHSG		10117	*****	•	*
COMMON /TORGOA / ILCHOA(3) : INCHOA(3) : INAEGA : INAE	C TORQUE OCCUPANT ALONE	COMMON BLOCK		•	
C TOROUE SEAT ALONE COMMON BLOCK C COMMON / TORGSA / TLAESA TMAESA THAESA C COMMON / TORGSA / TLAESA TMAESA THAESA C COMMON / TORGSA / TLAESA TMAESA THAESA T TLAESO(2) TMAESO(2) TMAESO(3) TMAESO(6) TMAESO(6) TMAESO(6) TMAESO(6) TMAESO(7) TMAESO(6) TMAESO(7) TMAESO TMAESO(7) TMAESO TMAESO(7) TMAESO TMAESO(7) TMAESO TM	CDMMON /TDRODA /	TLCHOA(3). TLAEDA	TMCHDA(3) TMAEOA		3),
COMMON / TORGSA / TLAESA THAESA THAESA  COMMON / TORGSA / TLAESA THAESA THAESA  COMMON / TORGSO / TLCASO(2) THACSO(2) THACSO(2)  TLCLSSO(2) THACSO(2) THACSO(3)  TLCHSO(3) THAESO THAESO THAESO THAESO  TLCHSO(3) THAESO THAESO THAESO THAESO THAESO  TLCHSO(3) THAESO THAESO THAESO THAESO THAESO THAESO  TLCHSO(3) THAESO	C TORQUE SEAT ALONE COMM	ION BLOCK			
C COMMON / TORQSO   TLCSSO(2)   TMCSSO(2)   TMCASO(2)    - COMMON / TORQSO   TLCSSO(2)   TMCASO(2)   TMCASO(2)    - COMMON / TORQSO   TLCLSSO(6)   TMSCSO(6)   TMCHSSO(6)    - TLCHSO(6)   TMSCSO(6)   TMCHSSO(6)   TMCHSSO(6)    - TLCHSO(6)   TMCHSSO(6)   TMCHSSO(6)   TMCHSSO(6)    - TLCHSO(7)   TMCHSSO(7)   TMCHSSO(7)    - TLCHSO(7)   TMCHSSO(7)   TMCHSSO(7)    - CARDOYNAMICS INFORMATION COMMON BLOCK  C AERODYNAMICS INFORMATION COMMON BLOCK  C ACRO   CONDE   CONDE    - CASO   CONDE   CONDE    - CASO   CONDE   CONDE    - CASO   CONDE   CONDE    - CASO   CONDE   CONDE    - CALL HEADER   CONDE   CONDE    - THERETO   TO   CONDE    - THERETO   CONDE   CONDE    - THERETO   CONDE   CONDE    - THERETO   CONDE    - THERETO   CONDE   CONDE	COMMON /TORGSA /	TLAESA .	TMAESA	TNAESA	
TMCASO(2) : TMCASO(2) : TMTUBSO : TNUBSO(6) : TMRSQ(6) : TNRLSQ(6) : TMCHSO(3) : TMCHSO(4) : TMCHSO(4) : TMCHSO(5) : TMCHSO(6)	C TORQUE SEAT/OCCUPANT C	DMMON BLOCK	• • • • • • • • • • • • • • • • • • • •	•	• • • • • • • • • • • • • • • • • • • •
COMMON / TORGSO / TLCASO(2)   TNCASO(2)   TNCASO(2)    + TLLUBSO   TLCASO(6)   TMAUBSO   TNTUBSO    + TLCASO(6)   TMACSO(6)   TNACSO(6)    + TLCASO(6)   TMACSO(6)   TNACSO(6)    + TLCASO(6)   TMACSO(6)   TNACSO(6)    + TLCASO(6)   TMACSO(6)   TNACSO(6)    + TLCASO(6)   TNACSO(6)   TNACSO(6)    - TLCASO(6)   TNA	C	**********	**********	*	************
TLLSGO(6)   TMSLSO(6)   TMSLSO(6)	COMMON / TOROSO /	TLCASO(2) .	TMCASO(2)	TNCASO(	2) .
+ TLRKSG(8) ; TMRKSG(8) ; TMRKSG(6) ; TLRKSG(8) ; TMRKSG(8) ; TMRK	<b>+ +</b>	TLTUBSO ,	TMTUBSO	TNSISD	
TLCHSG(3)   TMCHSG(3)   TNCHSG(3)	. +	TLRK50(6) .	TMRK SO (6)	TNRKSO(	. (9
TLAESO	•	TLCHS0(3)	TMCHSO(3)	TNCHSO(	3) .
### ### ##############################	• 4	TLAESO .	TMAESO	TNAESO	•
AERDDYNAMICS INFORMATION COMMON BLOCK  COMMON / AERGCFS / DAALPH , DABETA , SAVEL , DAMACH SAALPH , SABETA , SAVEL , SAMACH , SABETA , SOVEL , SAMACH , SABETA , SOVEL , SAMACH , SOBETA , SOVEL , SOMACH , SOBETA , SOVEL , SOMACH , SOBETA , SOVEL , SOWACH , SOBETA , SOVEL , SOWACH , SOBETA , CVSA		LUKI SU	- MUN - 30	. 1808130	•
COMMON / AEROCFS / DAALPH , DABETA , DAVEL , DAMACH	C AERODYNAMICS INFORMATI	ON COMMON B	DCK		
SAALPH , SABETA , SAVEL , SAME  SOALPH , SOBETA , SOVEL , SOMA  CXSA , CYSA , CZSA , CLSA , CMOA ,  CXSA , CYSA , CZSA , CLSA , CMOA ,  CXSO , CYSO , CZSA , CLSA , CMSO ,  LU = BIAS + 25  LU = BIAS + 25  CXSO , CYSO , CZSA , CLSA , CMSO ,  IF (PRTFMO , LT ) GO TO 100  IF (PRTFMO , EQ , O) GOTO 9900  IF (PRTFMO , EQ , O) GOTO 100  IF (IEVENTS(2B) , EQ , O) GOTO 9900  IF (IEVENTS(2B) , EQ , O) GOTO 9900  IF (IEVENTS(2B) , EQ , O) GOTO 9900  CONTINUE  IF (LINECT(25) , NE , O) GOTO 9900  CALL HEADER  WRITE(LU, 7000) PRTWGHT(PRTINDX ) , PRTWGHT(PRTINDX ) ,  FRILNGT(PRTFMO , LT , O) GOTO 9900  CONTINUE  RESULT2=SQRT(FXAEOA + FYAEOA + FYAEOA + FZAEOA*FZAEOA  WRITE(LU, 7010) TIME  FXAEOA	COMMON /AEROCFS /	OAALPH .	OABETA	. DAVEL	. DAMACH
SOALPH , SOBETA , SOVEL , SOME  CXOA , CYDA , CZDA , CLOA , CMOA ,  CXSA , CYSA , CYSA , CLSA , CMOA ,  CXSA , CYSA , CZSA , CLSA , CMSA ,  CXSO , CYSO , CZSO , CLSO , CMSA ,  LU = BIAS + 25  LU = BIAS + 25	+	SAALPH .	SABETA	. SAVEL	. SAMACH
CXDA , CYDA , CZDA , CLDA . CMDA . CXSA , CYSA , CYSO , CZSO , CLSO , CMSO , LU = BIAS + 25  IF (PRTFQ LT 0) GD TO 100  IF (IEVENTS(28) EQ 0) GDTO 9900  IF (IEVENTS(25) = MOD (IPRTCNT(25)+1, PRTFRO)  IF (IEVENTS(25) = MOD (IPRTCNT(25)+1, PRTFRO)  IF (IEVENTS(25) = MOD (IPRTCNT(25)+1, PRTFRO)  IF (IEVENTS NE 0) GD TO 100  CONINUE  WRITE(LU, 7000) PRTWGHT(PRTINDX) , PRTWGHT(PRTINDX) , PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX) , FRTLNGT(PRTINDX) , FRTLNGT(AMEDA*TNAE	•		SOBE	SOVEL	. SOMACH
CXSA , CYSA , CZSA , CLSA , CMSA , CMSA , CMSA , CASO , CA	*	•	•	. CLDA .	٠
LU = BIAS + 25  If (PRTFRO LT 0) GO TO 100  If (IEVENTS(28) EQ. 0) GOTO 9900  If (IEVENTS(28) = MOD (IPRTCNT(25)+1, PRTFRO)  If (IEVENTS(25) = MOD (IPRTCNT(25)+1, PRTFRO)  If (IEVENTS NE. 0) GOTO 100  If (IEVENTS NE. 0) GOTO 9900  CONTINUE  If (IPRTCNT(25) LE. MAXLINE) GOTO 200  CALL HEADER  WRITE(LU, 7000) PRTWGHT(PRTINDX) , PRTWGHT(PRTINDX)  If (PRTFRO LT 0) GOTO 9900  CONTINUE  RESULTI=SQRT(FXAEOA+FXAEOA + FYAEOA+FYAEOA + FZAEOA+FTAEOA  RESULTI=SQRT(FXAEOA+TLAEOA + TMAEOA+TMAEOA + TNAEOA+TNAEOA  WRITE(LU, 7010) TIME  FXAEOA	<b>+</b> +	•	٠	. CLSA	•
F (PRTFRO LT. 0) GD TO 100   F (LEVENTS 28)	+	•	•		-
		GO TO 100			
			8		
IF (IEVLINE NE. 0) GOTO 9900		G010 100			
	NF NC	GO TO 100			
CONTINUE  LECTROS LE. MAXLINE) GOTO 200  CALL HEADER  WRITE(LU, 7000) PRIWGHT(PRTINDX), PRTUGHT(PR  FRILLIS PRINGE	IF (IPRICNI (25) NE	0) 6010 99	00		
IF(LINECT(25) LE. MAXLINE) GDTO 200 CALL HEADER WRITE(LU,7000) PRTWGHT(PRTINDX), PRTWGHT(PR + FYAEOA), PRTLNGT(PR IF(PRIFRO LT. 0) GOTO 9900 CONTINUE RESULT2=SQRT(FXAEOA+FXAEOA + FYAEOA+FYAEOA + RESULT2=SQRT(TLAEDA+TLAEOA + TMAEOA+FWAEOA + WRITE(LU,7010) TIME + FXAEOA , FYAEOA , FZAEO + GOALPH , GABETA , GAVEO CONTINUE CONTINUE	CONT INUE				
MRITE(LU, 7000) PRIWGHT(PRIINDX), PRIWGHT(PR WRITE(LU, 7000) PRILWGHT(PRIINDX), PRILWGT(PR IF(PRIFRO LT. 0) GOTO 9900 CONTINUE RESULT1=SQRT(FXEGO+FXEGO + FYAEGO+FYAEGO + RESULT2=SQRT(FXEGO+FXAEGO + FWAEGO+FYAEGO + WRITE(LU, 7010) TIME FXAEGO + FYAEGO + FAEGO + FZAEGO + MRITE(LU, 7010) TIME CONTINUE CONTINUE	2)	MAXLINE) GO	10 200		
+ FEBULI = SORI(FXEDA+FYAEDA + FYAEDA+FYAEDA + FYAEDA + FYA		MCHT ( DOT TAN)		TOPTIMOY	_
IF(PRIFRO LT. 0) GOTO 9900  CONTINUE  RESULT:=SGRI(FXEGA+FXEGA + FYAEGA+FYAEGA +  RESULT:=SGRI(TLAEGA+TLAEGA + TMAEGA+TMAEGA +  WRITE(LU,7010) TIME  TAAEGA , FYAEGA , FZAEG  TLAEGA , FAEGA , FAEGA , TAAEGA   LINECT(25) = LINECT(25) + 1  GO TO 9900  CONTINUE		LNGT (PRT INDX	٠.	T (PRT INDX	
CONTINUE  RESULT:=SQRI(FXAEDA+FXAEDA + FYAEDA+FYAEDA +  RESULT==SQRI(TLAEDA*TLAEOA + TMAEDA*TMAEDA +  WRITE(LU,7010) TIME  + FXAEDA , FYAEOA , FZAEO +  TLAEOA , TMAEOA , TNAEOA , TNAEO +  CAALPH , GABETA , GAVEL  CONTINUE	IF (PRIFRO .LT.	0066 0109			
RESULTZ=SQRI(TLAEDA*TLAEDA + FTAEDA*FTAEDA + RESULTZ=SQRI(TLAEDA*TLAEDA + TMAEDA*TMAEDA + WRITE(LU,7010) TIME  TLAEDA , FYAEOA , FZAEO  TLAEOA , TMAEOA , TNAEOA , TNAEO  LINECT(25) * LINECT(25) + 1  GO TO 9900  CONTINUE				•	
WRITE(LU, 7010) TIME  ***********************************	RESULTI=SQRI(FXAEO		YAEOA • FYAE	+ 4	DA*FZAEOA)
+ FXAEDA FYAEOA FZAEOA . TAEOA	WRITE(LU, 7010) TIM		TACOA: TAAC	٠	UA - INAC UA )
+ TLAEGA . TWAEDA . TNAEDA			٠	ZAEOA	, RESULT1 ,
+	+ 1LA	•	•	NAEOA	. RESULT2 .
LINECT(25) = G0 T0 9900 CONTINUE		•	•	AVEL	. DAMACH
		1(25) + 1			

```
249
PAGE
83/11/07 09 41 53
            FTN 4 6+428
74/74 OPT=1
SUBROUTINE REPRIZE
```

SUBROUTINE REPRIZE  C SEAT ALONE ARRODYNAMIC FORCES AND MOMENIS REPORT  C COCCUMON / TORCES / FACING 13   FYREGA    C SEAT/OCCUPANT ALONE FORCES COMMON BLOCK    C SEAT/OCCUPANT FORCES / FACING 13   FYREGA    C SEAT/OCCUPANT FORCES / FACING 13   FYREGA    C SEAT/OCCUPANT FORCES / FACING 13   FYREGA    C SEAT/OCCUPANT FORCES COMMON BLOCK    C SEAT/OCCUPANT FORCES COMMON BLOCK    C SECTION 2 COMMON / REPORT / REFIXED    FYREGO   FYREGO    FYREGO    FYREGO   FYREGO    FYREGO    FYREGO   FYREGO    FYRE	_							
C   C   C   C   C   C   C   C   C   C		SUBBOLLINE REPRIN	92					
		:	• • • • • • • • • • • • • • • • • • • •	••••••	•			
			IC FORCES AND N	NOMENTS REPO	JRT	•		
		COCCUPANT ALONE FORCES	COMMON BLOCK	•			• • •	
		**************************************	FXCHUA(3)	VCHOA(3)	F ZCHOA (	3)		
		, 101000 / 10mm00	FXAEDA . F	YAEDA	FZAEOA			
			*********	*********	******	***********	***	
		C SEAT ALONE FORCES CON	MON BLOCK	****	***	*******	•	
C SELTYOCCUPANT FORCES OF FYCASO(2)   FCCASO(2)		COMMON /FORCESA /	FXAESA . F	YAESA .	FZAESA			
COMMON / FORCESO / FXCASO(2)   FYCASO(2)   F7CASO(2)   FYTUSCO   FYTUSCO   F7CASO(3)   FYTUSCO   FYCASO(4)   F7CASO(4)   FYCASO(4)   FYCASO(4)   F7CASO(4)   FYCASO(4)   FYCASO(4)   F7CASO(4)   FYCASO(4)   FYCAS		C SEAT/OCCUPANT FORCES	COMMON BLOCK	****	• • • • • • • • • • • • • • • • • • • •	:	•	
		***************	**********	********	******	************	****	
FXTURSO   FYTURSO   FYTURSO   FZECSO(6)   FZECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO(6)   FXECSO   FXEC		COMMON /FORCESO /	/ FXCASD(2) . F	*YCASD(2) .	FZCASO(	(2)		
FXRLSGIGE   FYSLSGIGE   FZSLSGIGE		+	-	· y ru850	FZTUBSO			
FXCHSD(3)   FXCHSD(6)   FXCHSD(6)		+	•	. YSLS0(6) .	F25L50(	. (9)		
FARESO   F		*	•	YRKSO(6)	FZRKSO			
FYMETSO FYMETSO FORTSO		•	•	YCHSO(3)	12CHS01	. (6		
C SECTION 2 COMMON BLOCK  C COMMON / IREPIS(31)  INTEGER  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C COMMON / MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31)  HEADOR HEADROL HEADAT HEADNEL LU  HEADROL HEADAT HEADNEL DRIVERS(38) PRITMOX TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA(193) TRANSA INTERPOX TRANSA INTERPOX INTE		+ 4	•	TARSO	FZDRTSO	-		
COMMON / IREPORT / IREPTS(31) PRTFRQ, P11, P12, P13  COMMON / IREPORT / IREPTS(31) PRTFRQ, P11, P12, P13  COMMON / IREPORT / IREPTS(31) PRTFRQ, P11, P12, P13  COMMON / MISC / IPAGECT(31) IPATCNT(31)  MAXLET   ILACOTOR   MAXREET   LUX MAXREE						***********	***	
COMMON / IRECORT / IREPTS(31) PRTFRQ, P11, P12, P13  COMMON / IRECORT / IREPTS(31) PRTFRQ, P11, P12, P13  COMMON / MISC / IPAGECT(31) LINECT(31) IPRTCNT(31)  MAXLINE		C SECTION 2 COMMON BLC	)CK		***************************************	***************************************	• •	
C. MISCELANEOUS DATA COMMON BLOCK  C. MISCELLANEOUS DATA COMMON BLOCK  C. COMMON / MISC		COMMON / IREPORT	/ IREPTS(31)	. PRTFRQ.	311,P12.	, P13		
COMMON / MISC / IPAGECT(31) LINCT(31) IPATCNT(31)  COMMON / MISC / IPAGECT(31) LINCT(31) IPATCNT(31)  HAXENIT HAXENIT HAXENIT HAXENIT HAXENIT HEADVEL HAXEN HEADVEL HE		INTEGER	PRTFRQ.PI1,P	12,P13				
(1) LINECT(31) MAXREPT MAXREPT HEADALT HARANAS  PRTMASS  PRTMASS  PRTMASS  PRTMASS  ACCEL(3) BIAS  PRTMASS  TACCEL(3)  RES DELTAT  AUTOROS(225)  TVCEOS(225)  TVCEOS(225)  TVCEOS(225)		C MISCELLANEOUS DATA CC	DAMON BLOCK	***	* * * * * * * * * * * * * * * * * * * *	***	• •	
COMMON /MISC / IPAGECT(31) LINECT(31)  HARDER   MAXEEPT    HEADSR   HEADALT    HEADSR   HEADALT    HEADSR   HEADALT    HEADSR   HEADALT    HEADSR   HEADALT    HEADSR   HEADALT    HEADSR   HEADYAM    INTEGER   PRIMASS    HARDER   HEADYAM    HARDER   HARDER    HARDER   HEADYAM    HARDER   HARDER    HARDER   HEADYAM    HARDER   HARDER    HARD			************	*********		***********	***	
FEVLINE   FERELG			/ IPAGECT(31)	. LINECT(:	31)	MAXEVNT		
HEADALT		•	IEVL INE	. TERRFLG	•	rs.	•	
HEADSR HEADVAW HEADVAL HEADWGI  HEADWGI  HEADWGI  HEADWGI  HEADWGI  HEADRR(24) FEVENTS(38)  HWDC  PRIMASS(2) PRINDX  VCCEL(3) VACCEL(3)  XACCEL(3) VACCEL(3)  REPTYPE BIAS  HRWGHI  PRIMGHI  PRIMGHI  PRIMGHI  COMMON / RKUITA / TIME TIMES  HRAJAC(193) TVCCGS(225)  HANDAC(193) TVCCGS(225)  HANDAC(193) TVCCGS(225)  HODAISA(65) INTERNACES  HODAISA(65) TVCCGS(225)		•	IDATE	. HEADALT	•	HEADVEL	•	
HEADROL HEADWGT  REPTYPE(5,31) PRILNGI(2)  HEADER(24) INVECTOR TO THE TOTAL TO THE TOTAL TO THE TOTAL TO THE TOTAL TOTAL TO THE TOTAL TOTAL TO THE TOTAL		•	HEADSR	. HEADYAW	•	, HEADPIT	•	
### ### ##############################		*	HEADROL	. HEADWGT	•	BIAS	•	
HEADER(24)   TEVENTS(38)		•	REPTYPE (5,31	•	(2)	PRIWGHT(2)	-	
TWO   TWO		•	IHEADER(24)	. IEVENTS	(38)	æ	•	
PRTMMSS(2)		+		IMADO	•			
XYZ(3)		•	PRIMASS(2)	PRTINDX	•	PKZVEL	•	
TACCEL(3)		•	ZVECT(3)	. XYZ(3)	•	SAVITME	•	
TRAJEGE REPTYPE BIAS  HETWGHT PRIMASS  HITEGRATION ROUTINE COMMON BLDCK  COMMON / RKUTTA / TIME TIMES DELTA!  TRAJCA(193) TVCEGS(225)  HONTINE (193) TVCEGS(225)  HONTINE (193) TVCEGS(225)  HONTINE TIMES (193) TVCEGS(225)		•	XACCEL(3)	YACCEL	3)	ZACCEL(3)		
PRIMASH  PRIMASH  PRIMASS  INTEGRATION ROUTINE COMMON BLOCK  COMMON / RKUTTA / TIME TIMES DELTAT  TRAJAC(193) TVCEQS(225)		INTEGER	REPTYPE	, BIAS	•	PRICNE		
INTEGRATION ROUTINE COMMON BLDCK   COMMON   CO		+ +	PRIMOHI	, PRIMASS	•	, PRTINDX		
COMMON / RKUITA / TIME . TIMES . DELTAT . TRAUSA(193) . TRAUDA(193) . TVCEQS(225) . QUATGA(65) . QUATGA(65) . TPCPASS . TODINY . TPCPASS . TABLES .			•	• • • • •	: :	* * * * * * * * * * * * * * * * * * * *	. * •	
/ TIME , TIMES , DELTAT   TRAUSA(193) ; TRAUSA(193) ; TVCEGS(225) ; QUATSA(65) ; QUATSA(65) ; TVCEGS			***********	*********	:	***********	****	
TRAUSA(193)   TRAUDA(193)   TRAUDA(193)   TVCEOS(225)			•	. DELTAT	•	TRAUSD(193)		
TRAJAC(193)   TVCEOS(225)		•	TRAUSA( 193)	TRAJOA( 1	•	FRAUCH(97,3)		
ONATSA(65) . QUATGA(65)		*	TRAJAC(193)	. TVCEOS(2)	•	3UATSD(65)		
+ INTSTP . IPCPASS .		•	QUATSA(65)	. QUATGA(B		DUATAC(65) .		
XAI SINIUGI		•	INTSTP	. IPCPASS	•	(RKPASS		
ζ.,								

```
251
PAGE
   83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ******************
                                                                                                                                                                                                                                                                                                            C TORQUE SEAT/OCCUPANT COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CMSA CNOA CNSA CMSA CMSO CMSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . SAMACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOMACH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULTI=SORT(FXAESA*FXAESA + FYAESA*FYAESA + FZAESA*FZAESA)
RESULT2*SORT(TLAESA*TLAESA + IMAESA*TMAESA + TNAESA*TNAESA)
WRITE(LU,7010) TIME
   FTN 4.6+428
                                                                                                                                                                                                                                          I YPRI 1X
                                                                                                                                                                     IPYIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDMMON /TORQSD / TLCASO(2) , TMCASO(2) , TNCASO(2) , TLTUBSO , TNTUBSO , TNTUBSO , TLSLSO(6) , TMSLSO(6) , TNSLSO(6) , TLRKSO(6) , TMRKSO(6) , TNCKSO(6) , TLCKSO(6) , TMCKSO(6) , TNCKSO(6) , TNCKSO(7) , TNCKSO(
                                                                                                                                                                                                        IRE IN
                                                                                                                                                                                                                                                                                                                                        COMMON /TORGOA / TLCHOA(3), IMCHOA(3), INCHOA(3)

TLAEDA , IMAEDA , INAEDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IF (PRIFRO LT O) GDT0 200

CALL HEADER

WRITE(LU, 7000) PRIWGHT(PRTINDX) PRIWGHT(PRTINDX)

IF (PRIFRO LT O) GDT0 9900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . TNAESO . TNDRTSD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OAVEL
SAVEL
SOVEL
CLOA
CLSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . FZAESA
. TNAESA
. SAVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LU = BIAS + 26
IF (PRIFRO LT 0) GO TO 100
IF(IEVENIS(28) EQ 0) GOTO 9900
IF (PRIFRO EQ 0) GOTO 100
IP (PRIFRO EQ 0) GOTO 100
IPRICNI(26) * MOD (IPRICNI(26)+1, PRIFRQ)
                                                                                                                                   IYPRIX
                                                                                                                                                                                                        ICY I IX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CZOA
CZSA
CZSO
                                                                                                                                                                     IPVIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TMAESO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . SABETA
. SABETA
. SOBETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FYAESA
TMAESA
SABETA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C AERODYNAMICS INFORMATION COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CXDA . CYDA
CXSA . CYSA
CXSO . CYSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF(IPRICNT(26) .NE. 0) G0 T0 100
IF(IPRICNT(26) .NE. 0) G0T0 9900
                                                                                                                                                                                                                                                                      C TORQUE DCCUPANY ALONE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                               C TORQUE SEAT ALONE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TLAESO
TLORTSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LINECT(26) * LINECT(26) + GO TO 9900 CONTINUE
                                                                                                                                                                     I YPRI 2X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMON /AEROCFS / DAALPH
SAALPH
SUALPH
                                                                                                       171X
1713X
                                                                                                                                                                                                        ICVIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TLAESA
SAALPH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FXAESA
      0PT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200 CONTINUE
   SUBROUTINE REPRIZE
```

85

90

8

50

9

9

65

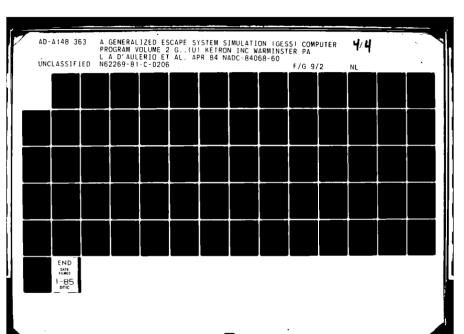
2

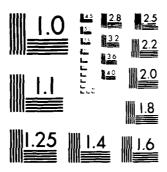
	C WRITE FORMAT STATEMENTS  C.***********************************
--	--

253 83/11/07, 09.41.53 SUBROUTINE REPRI27 FTN 4.6+428 74/74 OPT=1 SUBROUTINE REPRT27

N		AIRCRAFT LINEAR TIME HISTORY REPORT	ISTORY REPORT		•
3) 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		STANTS COMMON BLOCK			
31)	G SEC	COMMON /CONSINI /	GRAVITY . RAL	DDEG DEGRA	:
3 3 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	••••	TION 2 COMMON BLOC	¥		:
### ### ### ### ######################			*************		
IPRICNT (31 MAXEVNI LU HEADVEL HEADVIT BIAS BIAS BIAS PRIVAG. 1(2) T. ""S(38) PRIEMP (2) PRIVACL SAVINE ZACCEL (3) PRILNGT PRILNGT PRILNGT PRILNGT PRILNGT IRRADSO (193) IRADCH (97,3) QUAISCI (65) IRRAPSS IVPR IVPRIIX IVPRIIX IPPRIIX IPPRI		COMMON / INEFORT /	PRIFRO, PI1, PI2	P13	2
COMMON /MISC / IPPAGECT(31) . LINECT(31) . IPPRTCNT(31)  **ANALINE   HEMDAT   HEMDAT    **ENTYPE (5,31)   HEMDAT   HEMDAT    **HEMDAT   HEMDAT   HEMDAT    **HEMDAT   HEMDAT   HEMDY    **HEMDAT   HEMDY    **HEMDAT   HEMDY    **PREME (24)   IEVENTS(38)   TT **S(38)    **INTEGER   REPTYPE   BIAS   PRTUNGT    **PREME (23)   YACGEL(3)   PRTUNGT    **NACCEL(3)   YACGEL(3)   PRTUNGT    **PREME (23)   YACGEL(3)   PRTUNGT    **NACCEL(3)   YACGEL(3)   PRTUNGT    **PREME (23)   YACGEL(3)   TATAT    **PREME (23)   YACGEL(3)   YACGEL (3)    **PREME (23)   YACGEL (3)   YACGEL (3)    **PREME (23)   YACGEL (3)   YACGEL (3)    **PREME (23)   YACGEL (3)    **	**************************************	CELLANFOUS DATA COM	MON BLOCK	•	•
COMMON /MISC / IPAGECT(31) LINECT(31) IPATCNT(  # MAXENT   MAXEPT   MAXENT    # MAXENT   HEADALT   HEADPIT    # HEADSH   HEADPAM   HEADPIT    # HEADSH   HEADPAM   HEADPIT    # HEADPR   HEADPAM   HEADPIT    # HEADPR   HEADPAM   HEADPIT    # HEADPR   HEADPAM   HEADPIT    # HEADPR   HEADPT   HEADPIT    # HEADPR   HEADPT    # HEADT    # HEADT	0	***********	:	********	*
HEADER   HEADER   HEADER   HEADER		COMMON /MISC /	IPAGECT(31)	LINECT(31)	_
HEADVEL   HEADVEL		4	MAXLINE	MAXREP I	. MAXEVNI
HEADROL		• •	TOATE	HEADALT	HEADVEL
HEADMOIL   HEADMOIL   HEADMOIL		. •	HEADSR	. HEADYAW	, HEADPIT
HEADER(24)   FEVENTS(38)   PRIMOST (25)		*	HEADROL		, BIAS
HEADER(24)   IEVENTS(38)		•		. PRTLNGT(2)	PRIWGIT(2)
IMMUSC 		•	IHEADER(24)	, IEVENTS(38)	80
PRIMASS(2)   PRIMASS(2)   PRIMASS(2)   PRIMASS(2)   PRIMASS(2)   PRIMASS(2)   PRIMASS(2)   PRIMASS   PRAJAC(193)   PROPASS   PRIMASS   PRAJAC(193)   PROPASS   PRIMASS   PRIMASS   PRAJAC(193)   PROPASS   PRIMASS   P		•		IMVDC	
INTEGER		•	PRIMASS(2)	. PRIINUX	CAVITAG
INTEGER REPTYPE BIAS  PRINGHT PRINGHT PRINGES  INTEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTIA / TIME TIMES DELTAI  RAJSA(193) TRAJOA(193) TRAJOA(193) TOCEOS(225)  RAJSA(193) TRAJOA(193) TOCEOS(225)  RAJSA(193) TOCEOS(225) TOTEOS(225) TOTEOS(225		•	ZVECT(3)	. X12(3)	ZACCEL (3)
PRIWGHT   PRIWGHT   PRIMASS   PRIEMP   PRIMASS   PRIMA		1115050	DEDIVOR	BIAS	PRIINGI
PRTEMP   PRTEMP   PRTMASS		+ IN   C   C   C   C   C   C   C   C   C	PRIWGHT	,	
INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTTA / TIME   TIMES   DELTAT   TRAJSA(193)   TRAJDA(193)   TRAJDA(		•	PRTEMP	. PRIMASS	
INTEGRATION ROUTINE COMMON BLOCK   COMMON / RKUTTA / TIME				* * * * * * * * * * * * * * * * * * * *	
COMMON /RKUTTA / IIME , TIMES , DELTAT   IRAJSA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TRAJOA(193)   TVCEOS(225)   TRAJOA(193)   TVCEOS(225)   TVC		TEGRATION ROUTINE CO	MMON BLOCK	*********	
IRAJSA(193)   TRAJOA(193)   TRAJOA(193)     IRAJAC(193)   TVCEOS(225)     IRAJAC(193)   TVCEOS(225)     IRAJAC(193)   TVCEOS(225)     IRAJAC(193)   TVCPASS   TVCPASS     IRAJAC(193)   TVCPASS   TVCPASS     IRAJAC(193)   TVCPASS   TVCPASS     IRAJAC(1		COMMON /RKUTIA /	TIME TIMES	DELTAT	TRAJS0(193) .
TRAJAC(193)   TVCEQS(225)   OUATSOL		+	¥	TRAJOA( 193)	1RAJCH(97,3),
OUATSA(65)   QUATOA(65)   QUATOA(65)     INTSTP		•	1RAJAC(193) .	TVCEQS(225)	OUATSO(65)
INTSTP   INCPASS   INTSTP   INCPASS   INTSTP   INCPASS   INTST   INT			QUATSA(65) .	QUATOA(65)	QUATAC(65)
		•	INTSIP	IPCFASS .	TKEPASS .
			· SINIDAI	1 4 4	TVDACCY
1713.   1713.   1714.   1715		•		. VEDGAL	
IPPRIZA   IPPRIZA   IPPRIZA   IPPRIZA   IPPRIZA   IPPRIZA   ICVIIX   ICVIIX   ICVIIX   ICVIIX   ICVIIX   ICVIIX   ICVIIX   IFFRAJAC(1) . EQ. O) GD TO 8900   IFFRENCIALS   = MOD (IPPRICANT(28) + I, PRIFRO)   IFFRENCIALS   = MOD (IPPRICANT(28) + I, PRIFRO)   IFFRENCIALS   NE. O) GD TO 9900   IFFRENCIALS   NE. O) GD TO 9900   IFFRENCIALS   NE. O) GD TO 2000   IFFRENCIALS   NE. O) GD TO 2000   IFFRENCIALS		•		1.0011	X110011
		• •	IYPRI2X	IPYIX	IPYIIX
			ICVIX	1CY 1 1X	IREIN
		ú	Of an Talago		
		(PRIFRO LE O)	60 TO 100		
		_	(IPRICNI(28)+1	. PRIFRO)	
		. NE.	. 60 r0 100 : 0) GD 1D 990		
	Ď	CONTINUE	25	<b>)</b>	
CALL HEADER		IFILINECT(28)	MAXLINE) GO T	0 200	
		CALL HEADER			

```
255
 PAGE
 83/11/07 09:41.53
                                                                                                                                                                                                                                                                                                      XCCC = TRAJAC(17)/GRAVITY
YACC = TRAJAC(18)/GRAVITY
YACC = TRAJAC(19)/GRAVITY
ZACC = TRAJAC(19)/GRAVITY
ZACC = TRAJAC(19)/GRAVITY
RESULT1 = SQRT(XACC*XACC + YACC*YACC + ZACC*ZACC)
RESULT2 = SQRT(TRAJAC(14)*TRAJAC(14) + TRAJAC(15)*TRAJAC(15) +
+ TRAJAC(16)*TRAJAC(16)
RESULT3 = SQRT(TRAJAC(2)*TRAJAC(3)*TRAJAC(3) +
+ TRAJAC(4)*TRAJAC(4)
                                                                                                                                                                            + TRAJAC(14), TRAJAC(15), TRAJAC(16), RESULT1, + TRAJAC(2), TRAJAC(3), TRAJAC(4), RESULT3, + TRAJAC(2), TRAJAC(3), TRAJAC(4), RESULT3 9900 CONTINUE
 FTN 4 6+428
    0P I = 1
                                               200 CONTINUE
                                                                                                                                                                                                                                                                                RETURN
  SUBROUTINE REPRT28
                                                                              9
                                                                                                                                                        65
                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                             75
                                                                                                                                                                                                                                                                                                                                                                                       80
```





MICROCOPY RESOLUTION TEST CHART

NATIONAL RURERU OF STANDARDS 1967 A

T T T T T T T T T T T T T T T T T T T	COMMON / CONSTNI / GRAVITY RADDEG DEGRAD  COMMON / REPORT / REPTS(31) PRIFRO, PI1, PI2, PI3  INTEGER  COMMON / MATRIX / DCAME(3,3) DCMTE(3,3) DCMTE(3,4)  COMMON / MATRIX / DCAME(3,3) DCMTE(3,3) DCMTE(3,4)  COMMON / MATRIX / DCAME(3,3) DCMTE(3,4)  COMMON / MISC / IPAGE(1,3) DCMTE(3,3) DCMTE(3,4)  COMMON / MISC / IPAGE(1,3) DCMTE(3,1) DCMTE(3,1)  COMMON / MISC / IPAGE(1,3) DCMTE(3,1) DCMTE(3,	
COMMON /CONSINI / GRAVITY . RADDEG . DEGRAD . PI  SECTION 2 COMMON BLOCK  COMMON /IREDRI / REPIS(3) . PRIFRO, PII, PI2, PI3  COMMON /MATRIX / COMMON BLOCK  COMMON /MATRIX / COMMON BLOCK  COMMON /MATRIX / DOMAR(3,3) . DOMAR(3,3	C CONSIANIS COMMON BLOCK C COMMON / CONSINI / GRAVITY RADDEG DEGRAD C COMMON / REPORT / IREPTS(31) PRIFRO, PI1, PI2, PI3 C COMMON / MATRIX / DCMAE(3,3) DCMRE(3,3) DCMSR(3,3) C MATRIX COMMON BLOCK C MATRIX COMMON BLOCK C MATRIX COMMON BLOCK C MISCELLANGULS DATA COMMON BLOCK C C MISCELLA TIME TIMES BLOCK C C MISCELLA TIME TIMES BLOCK C C MISCELLA TIME TIMES TRAJOK (93) TR	
SECTION 2 COMMON SLOCK  COMMON / REPORT / IREPTS(31)  INTEGR  MATRIX COMMON BLOCK  MATRIX COM	COMMON / CONSINT / GRAVITY , RADDEG , DEGRAD COMMON / REPORT   REPIS(3)   PRIFRO, PII, PI2, PI3 COMMON / MATRIX / DCMAE(3,3)   DCMRE(3,3)   DCMSR(3) COMMON / MATRIX / DCMAE(3,3)   DCMSR(3)   DCMSR(3)   COMMON / MATRIX / DCMAE(3,3)   DCMSR(3)   COMMON / MISC   IPAGECT(31)   LINECT(31)   IFACT(31)   COMMON / MISC   IPAGECT(31)   LINECT(31)   IFACT(31)   COMMON / MISC   PROPORTION   MARKEPT   COMMON / MISC   PROPORTION   MANARET   COMMON / MISC   PROPORTION   MANARET   COMMON / MISC   PROPORTION   COMMON / RUTTA   TIME   TRAJAC(13)   TRAJAC(13)   COMMON / RUTTA   TIME   TRAJAC(13)   TRAJAC(133)   COMMON / RUTTA   TIME   TRAJAC(133)   TRAJAC(133)   COMMON / RUTTA   TIME   TIMES   TRAJAC(133)   COMMON / RUTTA   TIME   TRAJAC(133)   TRAJAC(133)   TRAJAC(133)   COMMON / RUTTA   TIME   TRAJAC(133)	
SECTION 2 COMMON BLOCK	C SECTION 2 COMMON BLOCK  C MATRIX COMMON   MATRIX   DCMAE(3,3)   DCMTS(3,3)   DCMTS(3,3,3)   DCMTS(3,3,3)	. PI
COMMON / IREPORT / IREP'S(31) . PRIFRO, PI1, PI2, PI3 INTEGER  MATRIX COMMON BLOCK  COMMON / MATRIX / DCMAE(3,3) . DCMSA(3,3) .  COMMON / MATRIX / DCMAE(3,3) . DCMSE(3,3) . DCMSE(3,3) .  COMMON / MATRIX / DCMSAE(3,3) . DCMSE(3,3) . DCMSE(3,3) .  MISCELLANEOUS DATA COMMON BLOCK  COMMON / MISC / IPAGECT(31) . LINET(131) . MAXEVNI .  FEVLINE   IERREPT   LUMET(131) . IPRICNI(31) . MAXEVNI .  HEADRIL   HEADRIL   HEADRIL   HEADVEL .  HEADRIC   HEADRIL   HEADVEL   HEADVEL .  HEADRIC   HEADWIL   HEADVEL   HEADVEL .  TOTAL   HEADVEL   HEADVEL   HEADVEL .  HEADRIC   PRILMGT(23)   PRILMGT(23)   PRILMGT(23)    HEADRIC   PRILMGT(23)   PRILMGT(23)   PRILMGT(23)    HEADRIC   PRILMGT(23)   PRILMGT(23)   PRILMGT(23)    HEADRIC   PRILMGT(23)   PRILMGT(23)   PRILMGT(23)    HEADVEL   HEADVEL   HEADVEL   HEADVEL    TOTAL   HEADVEL   HEADVEL   HEADVEL    TOTAL   HEADVEL   HEADVEL   HEADVEL    TOTAL   HEADVEL	C MATRIX (DOMAGE) 11, P12, P13  C MATRIX (DOMAGE (3,3) DCMTS (3,3)	
NUTEGER   PRIFERO, PII, PIZ, PI3	NTEGER	**********
### COMMON BLOCK  COMMON /MATRIX / DCMRE(3.3) DCMRA(3.3) DCMRA(3.3	### COMMON BLOCK  COMMON / MATRIX / DCMAE(3,3) DCMS(3,3) DCMSE(4, 4) DCMSE(3,3) DCMSE(3,	
COMMON / MATRIX / DCMR(3.3) DCMR(3.3	COMMON /MATRIX / DCMAE(3,3) . DCMRA(3,3) . DCMSA(	• • • •
COMMON /MATRIX / DCMAE(3.3) . DCMRA(3.3) . DCMSA(3.3) . DCMSE(3.3) . DCMOUN(3.3) . DCMOUN(3.3) . DCMOUN(3.3) . DCMOUN(3.3) . MAXEND . MAXE	COMMON /MATRIX / DCMAE(3,3) . DCMSAE(3,3) . DCMTE(	*********
DCMSE(3,3)   DCMSE(3,3)   DCMSE(3,3)   DCMSE(3,3)   DCMONUM(3,3)	DCMSE(3,3)   DCMTS(3,3)   DCMTS(3,3)   DCMTS(3,3)   DCMSE(3,3)   DATE   HEADLT   HEADSR   HEADLT   HEADSR   HEADLT   HEADSR   HEADLT   HEADSR   HEADRIT   HEADT   HEADRIT   HEADRIT   HEADRIT   HEADRIT   HEADRIT   HEADRIT   HEADT   HEADRIT   HEADT   HEADRIT   HEADT	.3)
DCMSAE(3.3)	DCMSAE(3.3). DCMOAE(3.3). DCMSR( DCMDUM(3.3)  MISCE_LEANEOUS DATA COMMON BLOCK  HANDLINE  HANDLINE  HEADRIL  HE	.3)
MISCELLANGOUS DATA COMMON BLOCK  COMMON /MISC	NESCELLANEOUS DATA COMMON BLOCK   IPAGECT(31)   LINECT(31)	.3) .
### ### ##############################	MISCELLANEOUS DATA COMMON BLOCK	:
COMMON /MISC / IPAGECT(31) LINECT(31) , IPRTCNT(31)  + HEADER HEADELT HEADVEL + HEADWGT HEADVEL + HEADVEL + HEADVEL + HEADVEL + HEADVEL + HEADVEL + HEADWGT HEADVEL + HEADWGT HEADVEL + HEADWGT + HEADVEL + HEAD	COMMON /MISC / IPAGECT(31) . LINECT(31)	
COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31)  ***AXLINE	COMMON /MISC / IPAGECT(31) . LINECT(31)	::::
HEADER   HEADER   HEADER   HEADER	### TEVLINE	PRTCNT(31)
HEADY   HEADVEL	TEVLINE   TENFELG	AXEVNT
HEADSE	HEADALT	<b>.</b>
HEADER	### HEADROL   HEADWGT   #### HEADROL   HEADWGT   ####################################	EADVEL
### ### ##############################	### ### ##############################	EAUPII
HEADER(24)   IEVENTS(38)   TIMES(38)	HEADER(24)   IEVENTS(38)	RIWGHT (2)
+ PRIMASS(2) PRIINDX PRIEMP(2) + ZVECT(3) XYZ(3) SAVTIME - XACCEL(3) XACCEL(3) ZACCEL(3) - INTEGER PRIEMP BLAS PRIEMS + PRIEMP PRIMASS PRIINDX - COMMON PRUTINE COMMON BLOCK PRINASS PRIINDX - COMMON / RKUTTA / TIME TIMES DELTAT TRAJSG(193) TRAJCH(97,3) TRAJCH(193) TRAJCH(197,3) TRAJCH(193) TRAJCH(193) TRAJCH(193) TRAJCH(193) TRAJCH(197,3) TRAJCH(193) TR	HWDC	IMES(38)
+	+ 2VECT(3) . XYZ(3) . YACCEL(3) . XYZ(3) . YACCEL(3) . YACCE	
+ XVZCEL(3) , XYZ(3) , ZACCEL(3)  INTEGER REPTYPE , BIAS , PRTLNGT  PRIEMP , PRIEMS , PRILNDX  ***********************************	+ XACCEL(3) , YACCEL(3)  INTEGER REPTYPE , BIAS  + PRIGHT , BIAS  + PRIGHT , BIAS	KZVEL
NYEGER   KACCEL(3)   YACCEL(3)   ZACCEL(3)	### ### ##############################	AVTIME
TINEGER   PREMISS   PRILINGS	The Ger	ACCEL(3)
+ PRINDX  ***********************************	PRTEMP   PRTEMP   PRTMASS	KILNGI
TRAJECTION ROUTINE COMMON BLOCK   TREATON ROUTINE COMMON BLOCK   TRAJECTION ROUTINE COMMON RECTAT   TRAJECTION ROUTINE   TRAJECTION	INTEGRATION ROUTINE COMMON BLOCK	RTINDX
INTEGRATION ROUTINE COMMON BLOCK	INTEGRATION ROUTINE COMMON BLOCK	**********
COMMON /RKUTTA / TIME, TIMES, DELTAT , TRAJSD(193) , TRAJSD(193) , TRAJCD(193) , TRAJC	COMMON /RKUTTA / TIME , TIMES DELTAT  + TRAJSA(193) : TRAJOA(193) + TRAJOA(193) : TVCEOS(225) + TRAJOA(193) : TVCEOS(225) + TAJOATSA(65) : TVCEOS(225) + TAJOATSA(65) : TVCEOS(225) + TAJOATSA(193) : TVCEOS(225) : TVCEOS(225) + TVCEOS(225) : TVCEOS	
TRAUSA(193)   TRAUDA(193)   TRAUDA(193)   TRAUDA(193)   TVCEQS(225)   UNITY   UNITY   TYX   TY	TRAJSA(193) . TRAJOA(193) . TRAJOA(193) . TRAJOA(193) . TVCEQS(225) . QUATSA(65) . IPCPASS . INY . INTY . INTY . INTY . INTY . INTY . INTO .	•
TRAUAC(193)   TVCEQS(225)     UNISTP	. TVCEOS(225) . QUATOA(65) . IPCPASS . IYX . IXSUMX . IXSUMX . IYPRIX . IYPRIX	JCH(97,3)
DINTST	OUATOA(65)  IPCPASS IYX IKSUMX IYIX IYIX IYIX	TSO(65)
INTERPORT   INCRESS   IN	I YECPASS I I X SUMX I X SUMX I X I X I X I X I X I X I X I X I X I	TAC(65) .
	IKSUMX IKSUMX IVIIX IVIIX IVIIX IVIIX	
IVIX IVIX IVIX IVIX IVIX IVIX IVIX IVIX	TYITY  I VPRIX  YEAR  YE	
IVION INPRIN IVPRION IPPLIN ICVIN ICVIN	( IVPRIX ,	A35A .
IVPRI2X IPVIX ICVIX	XIAGI	. XI 18
ICYIX , ICVI+X		X X
4	. ICYLIX	
	LU-81AS+29	

C SECTION 2 COMMON BLOCK  C COMMON / IREPORT / IREP 15(31) PRFRQ, P11, P12, P13  C MISCELLANEOUS DATA COMMON BLOCK  C COMMON / MISC / IPAGECT(31) MARKENT MAKKWIT INTEGER FULL (11) FRANKET HEADVEL HOW HEADVEL HEADVEL HEADVEL HOW	C SECTION 2 COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C MAXLINE	12, PI3 IPRICNI(31) MAXEVNT LU HEADVEL
SCELLANEON / IREPORT / IREPTS(31)	INTEGER	12. P13  IPRTCNT(31)  MAXEVNT  LU  HEADVEL
INTEGER	SCELLANEOUS DATA COMMON BLOCK  COMMON /MISC / IPAGECT(31) LINECT(31)  ***ACCEL(31) HEADYAW  ***HEADYAW  ***HYAN  *	: :=
COMMON MISC	COMMON   MISC   IPAGE(T(31)   LINECT(31)	: :=
COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNI(31)  HEADSR HEADAW HEADVEL HAADVEL HEADVEL HEADVEL HAADVEL HEADVEL HAADVEL HEADVEL HAADVEL H	COMMON /MISC / IPAGECT(31) . LINECT(31)  # MAXEPT   FEVLINE   FERFLG   FERFLG   FEADWAT   FEATWAS   FEATWAS   FEATWAS   FEATWAT   FATWAT   FAT	IPRICNI(31) MAXEVNT LU LU HEADVEL HEADPIT
MAXLINE	### ### ### ### ### ### ### ### ### ##	MAXEVNT LU HEADVEL HEADPIT
FERRICAL	FERFECE   FERFECE   FERFECE   FERFECE   FERFECE   FERDALT   FERDALT   FERDALT   FERDALT   FERDALT   FERDALT   FERDALT   FERDACE   FERDACE   FERDACE   FERDACE   FERFECE   FERF	HEADVEL HEADVIT
HEADY   HEADY   HEADY	HEADSR	HEADVEL
HEADY AW	HEADSR HEADVAU  HEADVAL  HOUDC  PRTMASS(2)	HEADPIT
### ##################################	HEADER(L HEADER(L) HEADER(Z)  HEADER(Z4)   IEVENTS(3B)  HEADER(Z4)   IEVENTS(3B)  HAUDC  PRIMASS(2)   VACCEL(3)  TACCEL(3)   VACCEL(3)  HAUDC  PRIMASS  HEALMACH  COMMON /RKUITA / IME , IMES DELTAT  TRAJGA(193)   TRAJGA(193)    HAJSP   INCPASS    HAJSP   INCPAS	
HEADER(24)   FRINGI(2)   FRINGH(2)	### ### ### ### ######################	BIAS
HEADER(24)   IEVENTS(38)   TIMES(38)	HEADER(24)   IEVENTS(38)	PRIMGHI (2)
HANDE	HWUDC	TIMES(38)
### PRTMASS(2)	PRTMASS(2) , PRTINDX  ZVECT(3) , YACCEL(3)  INTEGER REPTYPE , BIAS  REPTYPE , BIAS  REPTYPE , BIAS  PRTMASS  TEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTIA / TIME , TIMES , DELTAT  TRAJSA(193) , TVCEOS(225) , TVC	
### ##################################	### ##################################	
INTEGER	INTEGER	SAVITAR
INTEGER   REPTYPE   BIAS   PRTLNGT	INTEGER   REPTYPE   BIAS	ZACCEL (3)
### PRTEMP   PRTMASS   PRTINDX  TEGRATION ROUTINE COMMON BLOCK  COMMON /RKUTA / TIME	### PRTWGHT	PRTLNGT
### PRTEMP , PRTMASS , PRTINDX    FGRATION ROUTINE COMMON BLOCK	PRTEMP   PRTMASS	
### COMMON / RKUITA / TIME	COMMON / RKUITA	. PRTINDX
COMMON / RKUTTA / TIME TIMES DELTAT TRAUSO(193) .  + TRAUGH (193) . TRAUGH (193) . TRAUGH (97.3) .  + TRAUGH (193) . TRAUGH (193) . TRAUGH (97.3) .  + TRAUGH (193) . TRAUGH (193) . TRAUGH (97.3) .  + TRAUGH (193) . TVECOS(225) . QUATAC(65) .  + TRAUGH (193) . TVECOS(225) . QUATAC(65) .  - TREPS	COMMON / RKUTTA / TIME . TIMES . DELTAT  TRAJCA(193) . TRAJOA(193)  TRAJCA(193) . TVECOS(225)  OUATSA(65) . QUATOA(65) .  TRAJCA(193) . TVECOS(225) .  OUATSA(65) . QUATOA(65) .  INTSTP . TVECOSS . TVECOS . TVECOS . CUSO	****
+ TRAJON (193) TRA	TRAJAC(193)   TRAJAC(193)   TRAJAC(193)   TRAJAC(193)   TVCEOS(225)   TRAJAC(193)   TVCEOS(225)   TRAJAC(193)   TVCEOS(225)   TRAJAC(193)   TVCEOS(225)	**************************************
Heal	### ##################################	TDA.ICH(97.3)
TRY	### ##################################	OUATCO(AR)
INTSTP   IPCPASS   IPCPASS   IPCPASS   IPCPASS   IPPRX   IPCPASS   IPPRX   I	INTSTP   INTSTP   IPCPASS   IVX	OUATAC(65)
### ##################################	### HPDINTS   FEGURA	TOKOPEC
IKX		, 1200×1
		INDACK
1713X   1713	1713X   17PRIX   17	12128
TYPRIZX   TPYIX   TPYIX   TPYIX   TEVIX   TREIN   TCYIX   TCYIX   TREIN   TCYIX   TREIN   TCYIX   TREIN   TCYIX   TREIN   TCYIX   TREIN   TCYIX   TCYIX   TREIN   TCXIX   TC	TYPRIZK   TPVIK	TVPR11X
### ##################################	### 1CYIX   ICYIX   ICXIX   ICYIX   ICXIX   IC	10/11/
RODYNAMICS INFORMATION COMMON BLOCK COMMON / AEROCFS / GAALPH , GABETA , GAVEL , GAMA + SAALPH , SABETA , SAVEL , SAMA + SAALPH , SABETA , SAVEL , SAMA + SAALPH , SABETA , SAVEL , SAMA + CXGA , CYGA , CZGA , CLGA , CMGA , CXSA , CZSA , CLSA , CMSA , CXSA , CZSA , CLSA , CMSA , CXSO , CYSO , CZSO , CLSO , CMSO , IF (INTSTP , EQ. O) RETURN LU = BIAS + 30 IF (IEVENTS(28) .NE. O) GOTO 60	RDDYNAMICS INFORMATION COMMON BLOCK  COMMON /AEROCFS / DAALPH , DABETA , DAVEL  SAALPH , SABETA , SAVEL  SOALPH , SABETA , SAVEL  CXOA , CYOA , CZOA , CLOA  CXSA , CYSA , CZSA , CLSA  REAL MACH  IF(INTSTP , EO. 0) RETURN  LU = BIAS + 30	IREIN
### ##################################	### ### ##############################	
COMMON / AEROCFS / DAALPH , DABETA , DAVEL , DAMA SAALPH , SABETA , SAVEL , SAMA + SAALPH , SABETA , SAVEL , SAMA + CXOA , CYOA , CZOA , CLOA , CMOA , CXSA , CZSA , CLSA , CMOA , CXSO , CZSO , CLSA , CMSA , CXSO , CZSO , CLSO , CMSO , FFILM MACH	COMMON / AEROCFS / DALPH , DABETA , SABETA , CXSA , CYSA , CZSA , CXSA , CXSA , CZSA , CXSA , CXSA , CZSA , CXSA , CXSA , CZSA , CXSA , CXSA , CZSA , CXSA , CXSA , CZSA , CXSA , CX	
EROCFS / UAALPH , DABETA , DAVEL , DAMA SAALPH , SABETA , SAVEL , SAMA SAALPH , SOBETA , SAVEL , SDMA CXOA , CYOA , CZOA , CLOA , CMOA , CXSA , CYSA , CZSA , CLSA , CMSA , CXSO , CYSO , CZSO , CLSO , CMSO , EQ. 0) RETURN + 30	EROCFS / OAALPH , OABETA , SAALPH , SABETA , SOALPH , SOBETA , CXOA , CYOA , CZOA , CXSA , CXSA , CXSA , CXSO , CX	• • • • • •
SAALPH SABETA SAVEL SAMA SOALPH SOBETA SOVEL SONA CASA CYGA CZSA CLSA CMSA CXSA CXSO CXSO CXSO CXSO CXSO CXSO CXSO CXSO	SAALPH , SABETA , SABLTA , SOBLETA , SOBLETA , CXGA , CYGA , CZSA , CXSA , CZSA , CXSO , CXSO , CZSO , EO. 0) RETURN + 30	•
SOALPH , SOBETA , SOVEL , SDMA CXOA , CYOA , CZOA , CLOA , CMOA , CXSA , CLSA , CMSA , CXSO , CYSO , CZSO , CLSO , CMSO , CO O RETURN + 30	SDALPH , SDBETA , CXOA , CXOA , CYOA , CZOA , CYSA , CZSA , CXSA , CZSA , CXSO , CZSO ,	•
CXOA , CYOA , CZOA , CLOA , CMOA , CXSA , CYSA , CZSA , CLSA , CMSA , CXSO , CYSO , CZSO , CLSO , CMSO , EO. O) RETURN + 30	CXQA . CYQA . CZQA . CZSA . CXSA . CYSA . CZSA . CXSO . CYSO . CZSO EO. O) RETURN + 30	•
CXSA , CYSA , CZSA , CLSA , CMSA , CXSO , CXSO , CXSO , CLSO , CMSO , EO. 0) RETURN + 30	CXSA . CYSA . CZSA . CZSO . CZSO	CMOA .
CXSO CYSO CZSO CLSO CMSO	CXSO . CYSO . CZSO	. CMSA .
.EO. O) RETURN + 30 5(28) .NE. O) GOTO	.EQ. 0) RETURN + 30	. CMSO .
. EQ. O) RETURN + 30 5(28) .NE. O) GOTO	. EQ. O) RETURN + 30	
+ 30 5(28) .NE. 0) GOTO	90 +	
.NE. 0) G010		
	.NE. 0) 6010	

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C. WRITE FORMAT STATEMENTS

C. WRITE FORMAT ('5x, "IME", 6x, "ALPHA", 3x, "BERA", 4x, "MACH", 21x, 
+ "SEAT/OCCUPANT", 38x, "SEAT ALONE"/, 5x, "(6EC)", 5x, "(DEG)", 
+ 3x, "(DEG)", 4x, "NO. ", 25x, "(WCS)", 45x, "(WCS)"/, 33x, 2(9x, 
+ 3x, "(Y, "Y, "X, "Z", 7x, "L", 7x, "M", 7x, "M"), /)

7010 FORMAT(1x, F9.4, 2x, 3F8.2, 2(2x, 6F8.4))
                                                                                              50 ALPHA = SAALPH

BETA = SABETA

MACH = SABACH

51 IF (PRTERQ .LE. 0) GO TO 100

IPRICNT(30) = MOD (IPRICNT(30)+1, PRTFRQ)

IF(IEVLINE .NE. 0) GO TO 100

IF(INECT(30) .LE. MAXLINE) GOTO 200

CONTINUE

IF(INECT(30) .LE. MAXLINE) GOTO 200

CALL HEADER

WRITE(LU,7000)

IF(PRTFRQ .LT. 0) GOTO 9900

200 CONTINUE

WRITE(LU,7010) TIME . ALPHA . BETA . MACH

CXSO . CYSO . CZSO . CLSO . CNSO .

CXSA . CYSO . CZSO . CLSO . CNSO .

LINECT(30) = LINECT(30) + 1

GO TO 9900

9900 CONTINUE

RETURN
FTN 4.6+428
74/74 OPT=1
                                                             MACH = SOMACH
GOTO 51
SUBROUTINE REPRT30
                                                                                                        8
                                                                                                                                                                                                                 65
                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                  2
```

			*****	***		*******	
	C DYNAMIC CG REPORT			:			
	C Correspondent COMMON BLOCK	ock	•	*****	• • • • • • • • • • • • • • • • • • • •	**	
	C COMMON /IREPORT / IREPIS(31) , PRIFRQ,PI1,PI2,PI3 INTEGER PRIFRQ,PI1,PI2,PI3	/ IREPTS(31) , PR PRTFRQ, PI1, PI2, PI3	) 1.P12.	PRIFRO, PI1, PI2, PI3 PI3	.P12,P13	* * * * * * * * * * * * * * * * * * * *	
	Constants Common BLOCK  Constants contains and the contai	***			* * * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	
	COMMON /CONSINT / GRAVITY RADDEG DEGRAD PI C	/ GRAVITY	RADDEG	DEG , DE	DEGRAD PI		
	C*************************************	/ IPAGECT(31)	5	31)	IPRTC	IPRICNI(34)	
	• •	JEVLINE	•	MAAKEP! IERRFLG	. LU	 Ž	
	+ + +	IDATE HEADSR HFADBUI	• •	HEADALT HEADVAW HEADWGT	. HEADVEL . HEADPIT	EL .	
	• • •	REPTYPE(5,31)	. (16.	PRTLNGT(2)	• •	PRTWGHT(2)	
	•		•	IMVDC	• •	PRIEMP( 2)	
	+ +	PRIMASS(2)	•	PRT INDX	, PKZVEL SAVITME	٠.	
	• •	XACCEL(3)	•	YACCEL(3)	ZACCEL(3)	(6)	
	INTEGER	REPTYPE	•	BIAS	, PRTLNGT		
		PRTEMP	• •	PRTMASS	, PRIINDX	DX	
	C INTEGRATION ROLLINE COMMON BLOCK	OMMON BLOC	¥				
-	COMMON /RKUTTA / TIME . TIMES	TIME TIMES		DELTAT	TRAJSO(193)		
	•	TRAUSA( 193)	•	TRAJOA( 193)	. TRAJCH(97.3)	97.3)	
	<b>+</b> •	TRAUAC( 193)	•	TVCEQS(225)	. QUATSO(65)	65)	
	• •	INTSTP		IPCPASS	IRKPASS		
	+	IPOINTS	•	IYX	IYPRX		
	<b>+</b> •	ıkx	•	IKSUMX	IKPASSX	•	
	+ +	1713	•	17117	17127	•	
	• •	IYPRI2X		IPYIX	IPYIIX	- •	
	*	ICYIX	•	ICVI 1X	IREIN	•	
	Construction & COMMIND BLOCK	CK		***************************************		***	
-	COMMON / ISEATOC /	IPCNTL .	xcgso	. YCGSD .	zcgso . I	IXXSO	
	+ •	•	1x2S0	IVYSO .		12250 .	
	•		AREADA	WGHTOAB.	¥.		
	<b>+</b> •	IXXDA .	X Y OA	. IXZOA .	1 . A0Y01	. IYZOA .	
		•			_		
		•	25	. כפסכ	250		

```
83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7000 FORMAT(/,5X,"TIME",120,"SEAT/OCCUPANT ACCELERATION (SCS)",165,
+ "DISPLACEMENT OF O/A CG (SCS)",1107,"S/O CG LOCATION (SCS)"/,134,
+ "(G[S)",175,"(",A2,")", 1116,"(",A2,")"/,10X,3(10X,"X",9X,"Y",
+ 9X,"Z",8X,"RES"))
7010 FORMAT(1X,F9.4,1X,3(2X,4F10.4))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOCGLOC . SORT(XCGSO . XCGSO + YCGSO . YCGSO + ZCGSO . ZCGSO)
                                                                                                                                                           IYYDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOACCEL(1) = XACCEL(1) / GRAVITY
SDACCEL(2) = VACCEL(1) / GRAVITY
SDACCEL(3) = ZACCEL(1) / GRAVITY
SOACCEL(4) = SORT(SDACCEL(1) + SOACCEL(2) +
5 SOACCEL(2) + SOACCEL(3) + SOACCEL(3))
DISSOCG = SOACCEL(3) + CGVAL(1) + CGVAL(3) +
+ CGVAL(5) + CGVAL(5))
FTN 4.6+428
                                                                                                                                                      + 12250 . 1870A . 1870A . 1820A . 1870A . 1820A . 1820A . 1880A . 1880
                                                                                                                                                                                                                                                               C DYNAMIC CG VARIABLES COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WRITE(LU,7010) TIME, SDACCEL,
CGVAL(1), CGVAL(3), CGVAL(5), DISSDCG
XCGSO, YCGSO, ZCGSO, SDCGLDC
LINECT(31) = LINECT(31) + 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IF(LINECT(31) .LE. MAXLINE) GOTO 200
CALL HEADER
WRITE(LU,7000) PRTLNGT(PRTINDX) , PRTLNGT(PRTINDX)
IF(PRTFRQ .LT. 0) RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZCGDAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF(IEVEN'S(28) .Eq. 1) RETURN
IF (PRIFRQ .LE. 0) GDTO 100
IPRICNT(31) * MOD (IPRICNT(31)+1, PRIFRQ)
IF(IEVLINE .NE. 0) GDTO 100
IF(IPRICNT(31) .NE. 0) RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                               COMMON /DYNCGVB / CGVAL(6) , CGDERV(6) XCGDAO , YCGDAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IF (INTSTP . EQ. O) RETURN
LU = BIAS + 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DIMENSION SOACCEL(4)
OP 7 = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C WRITE FORMAT STATEMENTS
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          200 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RETURN
SUBROUTINE REPREST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                              ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
```

-	SUBROUTINE REPTORI
រភ	C POST SIMULATION REPORT OF MAXIMUM VALUES OF DRI VARIABLES C C CALLED BY DESCRIPE
9	CONSTANTS COMMON BLOCK  CONSTANTS COMMON BLOCK
	COMMON /CONSTNI / GRAVITY , RADDEG , DEGRAD , PI C++++++++++++++++++++++++++++++++++++
5	C MISCELLANGUOS DAIM COMMUN BLOCK
!	(31) , LINECT(31)
	TEVLINE TERRET TO THE TERRET T
	. HEADALT
50	. HEADYAW
	, HEADWGT , BIAS
	- -
	THEADER(Z4) IEVENIS(38) INTERVIEWS
60	DX PKZVEL
) 	. xyZ(3)
	3) YACCEL(3)
	INTEGER REPTYPE , BIAS , PRILNGT ,
30	+ PRTMASS PRTINDX
	DYNAMIC RESPONSE INDEX VARIABLES COMMON BLOCK
	COMMON /DRIVER / DRIVAL(2) . ORIDERV(2) . ACCEL1
38	DRI
	LU - BIAS + 1
	CALL HEADER WRITE(5,900)
9	WRITE(5,999) DRIMAX , TMAX
	900 FDRMAT(5(/),52X,"END DF SIMULATION"/.47X,"DRI VARIABLE MAXIMUM ". → "VALUES")
	999 FORMAT(5(/), 50X, "MAX DRI = ",F10.4//,50X,"AT TIME = ",F10.4,
45	RETURN FIND

SUBROUTINE RKTFM

METHOD - COMPUTES ROCKET FORCES AND MONENTS ACTING DN THE  EXECTOCUPANT DURING THE ROCKET STAGE OF THE  EXECTOCUPANT DURING THE ROCKET STAGE OF THE  EXECTOCUPANT DURING THE ROCKET STAGE OF THE  EXECTOCUPANT DIRECT STAGES THE LAND ROCKET BURNOUT  COMMUNICATIONS - COMMUNICATIONS - COLLATED STATE CONVERTED  THE TIME TO THE SEAT COORDINATE SYSTEM. AND ROCKET BURNOUT  COMMUNICATIONS - CALLS:  COMMUNICATIONS - CALLS FROM THE ROCKET BURNOUT  COMMON FORCES COMMON BLOCK  COMMON FORCES FROM THE STAGES COMMON BLOCK  COMMON FORCES COMMON BLOCK	25 25 25 25 25 26 26 26 26 26 26 26 26 26 26 26 26 26	UNCITON - COMPUTES ROCKET FORCES AND MOMENTS ACTING ON THE SEAT/OCCUPANT DURING THE ROCKET STAGE OF THE EJECTION.  METHOD - THENST FOR UP TO SIX ROCKETS IS CONSIDERED FROM THE TIME OF ROCKET IGNITION TO ROCKET BURNOUT.  THRUST VALUES FROM THE INPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED.  CALLED BY:  SEATOC  CALLS:  RAILFM, RECOV, ZLININT  COMMON VARIABLES DEFINED:  STAR(1) - THE THAT HAS ELAPSED SINCE ROCKET(1) IGNITION  CTC(1) - THRUST VALUES FROM THE ROCKET(1) INPUT THRUST  TABLE  NITAL ERROR CONDITIONS: NONE  NOTICE OF THE THAT HAS ELAPSED SINCE ROCKET(1) INPUT THRUST  COCCUPANT FORCES COMMON BLOCK  COCCUPANT FORCES COMMON BLOCK  COMMON /FORCESO / FXCASO(2) , FYCASO(2) , FZCASO(2) ,
METHOD THRUST FOR UP 10 SIX ROCKETS IS CONSIDERED FROM THE TIME OF ROCKET IGAITION TO ROCKET BURNOUT THRUST FROM THE INPUT TABLES ARE CONVINERED FROM THE INPUT TABLES ARE CONVINERED COLLED BY:  COLL		SEAT/OCCUPANT DURING THE ROCKET STAGE OF THE EJECTION.  THE TIME OF ROCKET IGNITION TO ROCKET BURNOUT.  THRUST YALUES FROM THE INPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED.  CALLED BY:  SEATOC.  CALLES SEATOC.  C
COMMON / FORCES COMMON BLOCK COMMON / FORCES		ELECTION.  METHOD - THRUST FOR UP TO SIX ROCKETS IS CONSIDERED FROM THE TIME OF ROCKET IGNITION TO ROCKET BURNDUT. THRUST VALUES FROM THE IMPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED.  CALLED BY:  SEATOCC CALLED BY:  SEATOCC CALLED BY:  COMMON VARIABLES DEFINED: STAR(I) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST TABLE NTIAL ERROR CONDITIONS: NONE  VOCCUPANT FORCES COMMON BLOCK COMMON /FORCES / FXCASO(2) , FYCASO(2) , FZCASO(2) ,
COMMUNICATIONS:  COMMON VARIABLES DEFINITION:  COMMON VARIABLES DEFINITI		METHOD - THRUST FOR UP TO SIX ROCKETS IS CONSIDERED FROM THE TIME OF ROCKET IGNITION TO ROCKET BURNOUT. THRUST VALUES FROM THE INPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED. CALLED BY: SEATOCC CALLS RAILEM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION CIC(1) - THALST VALUES FROM THE ROCKET(1) INPUT THRUST NITAL ERROR CONDITIONS: NONE  ***COCCUPANT FORCES COMMON BLOCK ***COCCUPANT FORCES COMMON FLORES ***COMMON FORCESO(2) , FYCASO(2) , FYCASO(2) ,
COMMON / FREES COMMON BLOCK CO		METHOD - THRUST FUR UP TO SIX MOCKETS IS CUNSIDERED FUGN THE TIME OF COCKET IGNITION TO ROCKET BURNOUT. THE TIME OF COCKET IGNITION TO ROCKET BURNOUT. THRUST VALUES FROM THE INPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED. CALLED BY: SEATOCC CALLS: RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(I) INPUT THRUST TABLE NITAL ERROR CONDITIONS: NONE  **********************************
THE TIME OF ROCKET IGATITION TO ROCKET ENDRUNDIT.  C TOTALED BY: C CALLED BY: C SECTION 10 COMMON BLOCK C CALLED BY: C COMMON / IRRCTOL / INRKT RECELV(6), READING(6), FARESO C COMMON / IRRCTOL / INRKT RECELV(6), READING(6), FARESO C COMMON / IRRCTOL / INRKT RECELV(6), READING(6), FARESO C CALLED BY: C MASSES COMMON BLOCK C MASSES		THE TIME OF ROCKET IGNITION TO ROCKET BURNDUT.  THRUST VALUES FROM THE IMPUT TABLES ARE CONVERTED  TO THE SEAT CORPLIANTE SYSTEM, AND ROCKET FORCES  AND MOMENTS ARE CALCULATED.  CALLED BY:  SEATOCC  CALLS:  RAILFM, RECOV, ZLININT  COMMON VARIABLES DEFINED:  STAR(I) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION  CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST  TABLE  NTIAL ERROR CONDITIONS: NONE  (OCCUPANT FORCES COMMON BLOCK  COCKMANN FORCES COMMON BLOCK  COMMON /FORCES / FXCASO(2) , FYCASO(2) ,
COMMON TRYOUT / RYDING FROM THE INPUT TABLES ARE CONVERTED COMMON TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MONENTS ARE CALCLATED. COLLED BY: C CALLED THE THAT TABS ELASED SINCE ROCKET(I) IMPUT THRUST C COMMON FORCES COMMON BLOCK C C SET/OCCUPANT FORCES COMMON BLOCK C C SET/OCCUPANT FORCES COMMON BLOCK C C COMMON FORCES FARD BY: C SECTION 10 COMMON BLOCK C C COMMON BLOCK C COMMON FORCES FARD BY: C MASSES COMMON BLOCK C C MASSES COMMON BLOCK C MAS		THRUST VALUES FROM THE INPUT TABLES ARE CONVERTED TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED.  CALLED BY: SEATOCC CALLS: RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION CTC(1) - THALST VALUES FROM THE ROCKET(1) INPUT THRUST TABLE NTIAL ERROR CONDITIONS: NONE  **********************************
COMMUNICATIONS C CALLED BY: C CALLED BY: C CALLS C COMMON VARABLES DEFINDS C COMMON / FORCES COMMON BLOCK C CALCULATED ROCKET THRUST TABLE COMMON BLOCK C CASSES COMMON VIROCKET VINNET REACHING (6) REVENTENG (6) FRANCES C MASSES COMMON VIROCKET MASSES C MASSES COMMON WASSES / MASSES C MASSES COMMON / MASSES / MASSES / MASSES C MASSES C MASSES C MASSES COMMON BLOCK C MASSES COMMON BLOCK C MASSES COMMON WASSES / MASSES C MASSES		TO THE SEAT COORDINATE SYSTEM, AND ROCKET FORCES AND MOMENTS ARE CALCULATED.  CALLED BY:  SEATOCC  CALLS:  RAILFM, RECOV, ZLININT  COMMON VARIABLES DEFINED:  STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION  CTC(I) - TIME THAT HAS ELAPSED SINCE ROCKET(I) INPUT THRUST  TABLE  NTIAL ERROR CONDITIONS: NONE  **********************************
COMMUNICATIONS - CALLED BY: CALLED BY: SEATOCC CALLS: RATIEM, RECOV. ZLININT NON-COMMON NARIBBLES PETINES: TSTARI) - THE THAT HE ELAPSED SINCE ROCKET(I) IGNITION CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST POTENTIAL ERROR CONDITIONS: NONE CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST POTENTIAL ERROR CONDITIONS: NONE COMMON /FORCES COMMON BLOCK COMMON /FORCES COMMON BLOCK COMMON /FORCES COMMON BLOCK COMMON /IRKTOUT / RYTOUT(2.25.6)  SECTION 10 COMMON BLOCK COMMON /IRCKET / INRYT RYTORIC (6) RYMSTOG  **RALPH(6) REMETA(6), RKMSTOG  **RALPH(6) RYMSTOG  **RALPH(6)	CO C	AND MOMENTS ARE CALCULATED.  CALLED BY:     SEATOCC     CALLS:     RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED:     STAR(I) - THRUST VALUES FROW THE ROCKET(I) IGNITION CTC(I) - THRUST VALUES FROW THE ROCKET(I) INPUT THRUST     TABLE NTIAL ERROR CONDITIONS: NONE  VOCCUPANT FORCES COMMON BLOCK COMMON FORCES COMMON BLOCK COMMON /FORCES COMMON BLOCK COMMON /FORCESO / FXCASO(2) , FYCASO(2) ,
COMMUNICATIONS  C CALLS  CALLS		UNICATIONS CALLED BY: SEATOCC CALLS: RAILEM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION CIC(I) - THRUST VALUES FROM THE ROCKET(I) IGNITION NITAL ERROR CONDITIONS: NONE  **********************************
C COMMON / IRRCOY ZLININT C COMMON / IRRCOY ZLININT C NON-COMMON VARIABLE DEFINED: C TSTARII) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C TSTARII) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C TSTARII) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C TSTARII) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C SET/OCCUPANT FORCES COMMON BLOCK C SET/OCCUPANT FORCES COMMON BLOCK C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK C RASSES COMMON MASSES / MASSOA :		CALLED BY:  CALLED BY:  CALLS:  RAILFM, RECDV, ZLININT  COMMON VARIABLES DEFINED:  STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION  CTC(I) - TABLE  NTIAL ERROR CONDITIONS: NONE  NTIAL ERROR CONDITIONS: NONE  OCCUPANT FORCES COMMON BLOCK  CONMON FORCES COMMON BLOCK  COMMON /FORCES / FXCASO(2) , FYCASO(2) ,
CALLED BY:  SEATOCC CALLS: SEATOCC CALLS: SEATOCC CALLS: SEATOCC CALLS: SEATOCC CALLS: SEATOCC CALLS: RAILFM. RECOV. ZLININT  NON-COMMON VARIABLES DEFINED: TABLE TABLE TABLE FXCASO(2) FYCASO(2) FYCASO(2) FYCASO(2) FYCASO(2) FYCASO(2) FYCASO(2) FYCASO(3) FYCASO(2) FYCASO(3) FYCASO(3) FYCASO(3) FYCASO(3) FYCASO(6) FY	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CALLED BY:  SEATOCC CALLS: RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR[1] - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION CTC(I) - THRUST VALUES FROW THE ROCKET(I) INPUT THRUST IABLE NTIAL ERROR CONDITIONS: NONE  **********************************
C CALLS: RAILEM RECOV, ZLININT C NON-COMMON VARIABLES DEFINED: C TSTARII) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST C COMMON / FORCES COMMON BLOCK C SET/OCCUPANT FORCES COMMON BLOCK C RECACCULATED ROCKET THRUST TABLE COMMON BLOCK C RECACCULATED ROCKET THRUST TABLE COMMON BLOCK C RECACCULATED ROCKET THRUST TABLE COMMON BLOCK C C SECTION 10 COMMON VIRCOKET THRUST TABLE COMMON BLOCK C C SECTION 10 COMMON BLOCK C C SECTION 10 COMMON BLOCK C C RECACCULATED ROCKET THRUST TABLE COMMON BLOCK C C RECACCULANGE REAL PHEGOL S RECALEMENT (6), RECALEMENT (6)		SEATOCC CALLS: RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1)- TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION STAR(1)- THALST VALUES FROM THE ROCKET(1) INPUT THRUST CTC(1)- THALST VALUES FROM THE ROCKET(1) INPUT THRUST NTIAL ERROR CONDITIONS: NONE ***********************************
TOTALLS:   CALLS:   CALLS   CALLADAMON VARIABLE DEFINED:   TSTAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION     CTC(1) - THRUST VALUES FROM THE ROCKET(1) INPUT THRUST     TABLE	NON OO	CALLS: RAILFM, RECOV, ZLININT COMMON VARIABLES DEFINED: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION CTC(I) - TIME THAT HAS ELAPSED SINCE ROCKET(I) INPUT THRUST TABLE NTIAL ERROR CONDITIONS: NONE NTIAL ERROR CONDITIONS: NONE COCCUPANT FORCES COMMON BLOCK COCCUPANT FORCES COMMON BLOCK COMMON /FORCESO / FXCASO(2), FYCASO(2),
RAILEM, RECOV, 2LININT   C		COMMON VARIABLES DEFINED: STAR[]- TIME THAT HAS ELAPSED SINCE ROCKET([]) IGNITION CTC([])- THRUST VALUES FROM THE ROCKET([]) INPUT THRUST TABLE NTIAL ERROR CONDITIONS: NONE  **********************************
C TSTAR(1) - TIME THAT HAS ELASED SINCE ROCKET(1) IGNITION C TSTAR(1) - TIME THAT HAS ELASED SINCE ROCKET(1) INPUT THRUST C CTC(1) - THALE C POIENTIAL ERROR CONDITIONS: NONE C C SEXT/OCCUPANT FORCES COMMON BLOCK C C SEXT/OCCUPANT FORCES COMMON BLOCK C COMMON / FORCES COMMON BLOCK C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK C SECTION 10 COMMON BLOCK C SECTION 10 COMMON BLOCK C SECTION 10 COMMON BLOCK C C MASSES COMMON BLOCK C MASSES COMMON BLOCK C MASSES COMMON MASSES / MASSON 1 MASSO		COMMON VARIABLES DETINE: STAR(1) - TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION  CTC(1) - THAUST VALUES FROM THE ROCKET(1) INPUT THRUST  TABLE NITAL ERROR CONDITIONS: NONE  **********************************
NON-COMMON VARIBLES DEFINED:  TSTAR(1) - THE THAS ELAPSED SINCE ROCKET(1) INPUT THRUST  TABLE  POTENTIAL ERROR CONDITIONS: NONE  CTC(1) - THRUST VALUES FROM THE ROCKET(1) INPUT THRUST  TABLE  POTENTIAL ERROR CONDITIONS: NONE  COMMON / FORCES COMMON BLOCK  COMMON / TRYCHSO(6) FYSLSO(6) FZCHSO(3)  FYCHSO(3) FYSLSO(6) FYSLSO(6)  FYSLSO(6) FYSLSO(6) FYSLSO(6)  FYCHSO(3) FYSLSO(6)  FYCHSO(6) FYS		COMMON VARIABLES DEFINED: STAR(1)- TIME THAT HAS ELAPSED SINCE ROCKET(I) IGNITION  CTC(I)- THRUST VALUES FROW THE ROCKET(I) INPUT THRUST  TABLE  NTIAL ERROR CONDITIONS: NONE  **********************************
C TSTAR(1) - THRE THAT HAS ELASED SINCE ROCKET(1) IMPUT THRUST C CTC(1) - THRUST VALUES FROM THE ROCKET(1) INPUT THRUST C CC. C SEA/OCCUPANT FORCES COMMON BLOCK C C SECTION 10 COMMON TROCKET THRUST TABLE COMMON BLOCK C C SECTION 10 COMMON BLOCK C C MASSES COMMON BLOCK C MASSES MASSOA MASSOA MASSOA MASSOA C MASSOA MASSOA MASSOA MASSOA MASSOA MASSOA C MASSOA MASSOA MASSOA MASSOA MASSOA C MASSOA MASSOA MASSOA MASSOA MASSOA C MASSOA M		STAR(1)- TIME THAT HAS ELAPSED SINCE ROCKET(1) IGNITION  CIC(1) - THAUST VALUES FROM THE ROCKET(1) INPUT THRUST  TABLE  NTIAL ERROR CONDITIONS: NONE  **********************************
CIC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST  TABLE  COMMON / FORCES COMMON BLOCK  COMMON / FORCES COMMON BLOCK  FXELSO(2) - FYCASO(2) - FYCASO(2) - FXTUBSO  FXTUBSO - FYTUBSO - FYTUBSO - FXTUBSO - FXTUBSO - FYTUBSO - FYCHSO(3) - FYCHSO	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CTC(I) - THRUST VALUES FROM THE ROCKET(I) INPUT THRUST TABLE NTIAL ERROR CONDITIONS: NONE ***********************************
TABLE	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TABLE NIIAL ERROR CONDITIONS: NONE ***********************************
C SEAT/OCCUPANT FORCES COMMON BLOCK  C SEAT/OCCUPANT FORCES COMMON BLOCK  C COMMON / FORCES COMMON BLOCK  C RECALCULATED ROCKET THRUST TABLE COMMON BLOCK  C SECTION 10 COMMON / TRKTOUT (2.25.6)  C SECTION 10 COMMON / TRKTOUT (2.25.6)  C SECTION 10 COMMON / TRKTOUT (2.25.6)  C SECTION 10 COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES MASSOAT MASSOAT MASSOAC MASSOC  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELANEOUS BLOCK  C MISCELANEOUS BLOCK  C MISCELANEOUS BLOCK  C MISCELANEOUS BLOCK  C MISCELA		NTIAL ERROR CONDITIONS: NONE  **********************************
SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON /FORCES COMMON BLOCK  FYTUBSO FYTUBS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	// CCUPANT FORCES COMMON BLOCK
SEAT/OCCUPANT FORCES COMMON BLOCK  COMMON / FORCES C FYCASO(2)   FYCASO(2)   FXTUBSO   FYSLSO(6)   FYSLSO(6)   FXTUBSO   FYSLSO(6)   FZRKSO(6)   FXRKSO(6)   FYRKSO(6)   FZRKSO(6)   FXARSO   FYRKSO(6)   FYCKSO(3)   FXARSO   FYRKSO(6)   FZRKSO(6)   FXARSO   FYRKSO(6)   FZRKSO(6)   FXARSO   FYRKSO(6)   FZRKSO(6)   FXARSO   FYRKSO(6)   FZRKSO(6)   FXARSO   FYRKSO   FYRKSO(6)   FXARSO   FYRKSO   FYRKSO(6)   FXARSO   FYRKSO   FXARSO   FYRKSO   FXARSO   FYRKSO   FXARSO   FYRKSO   FXARSO   FYRKSO   FXARSO   FXARSO   FYRKSO   FXARSO   FXARSO   FYRKSO   FXARSO   FXARSO   FYRKSO   FXARSO   FX	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	/OCCUPANT FORCES COMMON BLDCK ************************************
### ### ### ### ### ### ### ### ### ##	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	/OCCUPANT FORCES COMMON BLDCK COMMON /FORCESO / FXCASO(2) , FYCASO(2) ,
COMMON /FORCESO / FXCASO(2) : FYCASO(2) : FYCASO(3) : FYCASO(6) :		FYCASO(2) , FZCASO(2)
COMMON /FORCESO / FXCASO(2) , FYCASO(2) , FZCASO(2) , FXTUBSO , FYTUBSO , FXTUBSO , FYTUBSO , FY		FYCASO(2) , FZCASO(2)
COMMON /FORCESO / FXCASO(2) . FYCASO(2) . FZCASO(2) .  + FXTUBSO . FYTUBSO .  + FXTUBSO . FYTUBSO .  + FXTUBSO . FYTUBSO .  + FXCHSO(6) . FYRKSO(6) . FZRKSO(6) .  + FXCHSO(3) . FYCHSO(3) . FZCHSO(3) .  + FXCHSO(3) . FYCHSO(3) . FZCHSO(3) .  - COMMON /IRCCET THRUST TABLE COMMON BLOCK  - COMMON /IRCCET / INRKT . RKDELY(6) . RKGAMA(8) . RKTHRST(2.25 .  - RKALPH(8) . RKGAMA(8) . RKTHRST(2.25 .  - RKALPH(8) . RKGAMA(8) . RKTHRST(2.25 .  - RKALPH(8) . RKGAMA(8) . MASSO . MASSO .  - MASSES COMMON BLOCK  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOA . MASSOC . MASSOC .  - MASSOA . MASSOC . MASSOC . MASSOC . MASSOC .  - MASSOC . MAS	+ + +	FXCASO(2) , FYCASO(2) ,
FXTUBSO FYTUBSO FZTUBSO FZTUBSO FZTUBSO FXSLSO(6) FXSLSO(6) FZSLSO(6) FXSLSO(6) FXSLSO(6) FZCHSO(3) FZCHSO(3) FZCHSO(3) FXCHSO(3) FZCHSO(3) FXCHSO(3) FZCHSO(3) FZCHSO(3) FXCHSO(3) FZCHSO(3) FXCHSO(3) FXCHSO(3) FZCHSO(3) FXCHSO FXORTSO FXO	+ + + •	
FXRKSO(6), FYSLSO(6), FZSLSO(6), FZSLSO(6), FZRKSO(6), FXRKSO(6), FXRKSO, FYRESO, F	• • •	FXTURSO FYTURSO
FXRESO(6); FYRKSO(6); FZRESO(6); FZRESO(6); FXRESO(6); FXRESO(6); FYRESO(6);	• •	E VC1 CD(B)
FXCHSO(3); FYCHSO(3); FZCHSO(3); FZCHSO(3); FXAESO; FYAESO; FY	•	. (2)0000
FACESO   FACESO   FACESO   FACESO	•	, rykksu(6)
FARESO FYRESO FYRESO FERESO FE	•	. LYCHOULS)
### FXDRTSO , FYDRTSO   ###################################	*	. FYAESO .
RECALCULATED ROCKET THRUST TABLE COMMON BLOCK  COMMON / IRKTOUT / RKTOUT(2,25,6)  SECTION 10 COMMON BLOCK  COMMON / IROCKET / INRKT RKDELY(6), RKNPTS(6), IROKOUT RKIGN(6), RKMGHT(6), RKBURN(6), TSTAR(6), RKALPH(6), RKBETA(6), RKGAMA(6), RKHRST(2,25)  HASSES COMMON BLOCK  MASSES COMMON BLOCK  MASSES COMMON MASSES MASSER(6) MASSEC  REAL MASSES MASSER(6) MASSEC MASSEC  REAL MASSES MASSER MASSEC MASSEC  REAL MASSES MASSER MASSEC MASSEC  HASSES MASSEC MASSEC MASSEC MASSEC  COMMON / MASSES MASSEC MASSEC MASSEC  HASSES MASSEC MASSEC MASSEC MASSEC MASSEC  HASSES MASSEC M	•	FXDRTSO , FYDRTSO , FZDRTSO
RECALCULATED ROCKET THRUST TABLE COMMON BLOCK  COMMON / TRYTOUT / RKTOUT(2,25,6)  SECTION 10 COMMON BLOCK  COMMON / TROCKET / INRYT , RKDELY(6), RKBDTS(6), TSTAR(6), XPOSRK(6), YPOSRK(6),		
COMMON   TRYTOUT   RYTOUT   RYTOLY   SECTION 10 COMMON BLOCK   RYTOLY   START   STAR	C RECA	LCULATED ROCKET THRUST TABLE COMMON BLOCK
COMMON / IRKTOUT / RKTOUT(2,25,6)  SECTION 10 COMMON BLOCK  COMMON / IROCKET / INRKT , RKDELY(6), RKUPTS(6), IROKOUT ,  ** RKICN(6), RKBETA(6), RKBURN(6), TSTAR(6),  ** RKALPH(6), RKBETA(6), RKGAMA(8), RKTHRST(2,25)  INTEGER	Ceeeee	( 我就是我的现在分词 计对处记录 医克克氏试验检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检检
SECTION 10 COMMON BLOCK  CDMMON /IROCKET / INRKT , RKDELY(6), RKNPTS(6), IROKOUT ,  **		COMMON /IRKTOUT / RKTOUT(2,25.6)
C SECTION 10 COMMON BLOCK  C COMMON / IROCKET / INRKT . RKDELY(6), RKNPTS(6), IROKOUT . RKIGN(6), RKWGHT(6), RKGURN(6), TSTAR(6) . XPOSRK(6), YPOSRK(6), ZPOSRK(6), TSTAR(6) . KRALPH(6), RKBETA(6), RKGAMA(6), RKTHRST(2,25,6) . MASSES COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES MASSSA . MASSR(6) . MASSO . MASS	*****	· ************************************
COMMON / IROCKET / INRKT . RKDELV(6), RKUPTS(6), IROKOUT . RKDERV(6), RKBURN(6), TSTAR(6) . TATAR(6) . TATAR(6	C SECT	ION 10 COMMON BLOCK
COMMON / IROCKET / INRKT , RKDELY(6), RKNPTS(6), IROKDUT , RYDSRK(6), RKURN(6), RKURN(6), TSTAR(6) , RYDSRK(6), POSRK(6), TSTAR(6) , RKALPH(6), RKBTA(6), RKGMA(6), RKTHRST(2,25,6)	0	·*************************************
+	,	COMMON (100CKET / INDKT OWNERVE) OWNDERVE) 100KBHT
### XPOSRK(6), YPOSRK(6), RKGAMA(6), RKTHRST(2,25,6) ####################################	+	DETCHIE) DEMONTER DESIGNARY
The color of the	•	VOCCOVIA TROCKE)
TATEGER  REAL  C MASSES COMMON BLOCK  COMMON /MASSES / MASSOA1 , MASSOA2 , MASSO , MASSO ,  REAL  MASSOA1 , MASSOA2 , MASSO , MASSO ,  REAL  MASSOA1 , MASSOA2 , MASSO ,  REAL  MASSOA1 , MASSOA2 , MASSO ,  C MISCELLANEOUS DATA COMMON BLOCK  C MISCELLANEOUS DATA COMMON BLOCK  C C MISCELLANEOUS DATA COMMON BLOCK  C MASSOA ,	•	SHOSKK G).
C MASSES COMMON BLOCK C MASSES COMMON BLOCK COMMON / MASSES / MASSOA1 , MASSOA2 , MASSOA , MASSOA / MA	+	AKALPH(G), KKBELA(G), KKGABA(G),
C MASSES COMMON BLOCK  C MASSES COMMON BLOCK  C MASSES / MASSDA1 , MASSDA2 , MASSD , LINECT(31) , IPRTCNT(31) , TOMMON MISC / IPAGECT(31) , LINECT(31) , IPATCNT(31) , MAXEVNT		INTEGER
C MASSES COMMON BLOCK  COMMON / MASSES / MASSES , MASSER(G) , MASSED , MASSED ,  ** MASSES , MASSES , MASSER(G) , MASSED ,  ** MASSES , MASSER , MASSED , MASSED ,  ** MASSES , MASSER , MASSED ,  ** MASSES , MASSER , MASSED ,  ** Common Block ,  C MISCELLANEOUS DATA COMMON BLOCK ,  ** Common MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) ,  ** MAXENT , MAXENT , MAXENT , MAXENT ,  ** MAXENT ,  *		. ************************************
COMMON / MASSES / MASSOA , MAS	C MASS	ES COMMON BLOCK
COMMON /MASSES / MASSDA1 , MASSDA2 , MASSD , M	*****	(我就你这个我们的我们的我们的,我们的人们的,我们的人们的人们的人们的人们的人们的人们的人们的人们的人们的人们的人们的人们的人们
## MASSA		/ MASSOA! . MASSOA2 . MASSSO .
REAL   MASSOA   MASSOA   MASSO   MAS	•	. MASSRK(6) . MASSDC
C MISCELLANEOUS DATA COMMON BLDCK  C MISCELLANEOUS DATA COMMON BLDCK  Correspondent to the common block  Correspondent to the common block  Correspondent to the common block  Correspondent to the common block to the common blo		MASSOA1 MASSOA2 MASSSO .
C MISCELLANEGUS DATA COMMON BLDCK Cocceptor Common MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) , MAXEVT , MAX	•	MASSSA MASSRK MASSDC
C MISCELLANEOUS DATA COMMON BLDCK C***********************************		*********************
Constitution   MISC   IPAGECT(31)   LINECT(31)   IPRTCNT(31)   PRTCNT(31)   MAXEVI	C MISC	ELLANEOUS DATA COMMON BLOCK
	00000	- 神经原生的外交货物的原生的非原生的非原生的特殊原生的特殊原生的原生的特殊原生的特殊原生的非原生的非原生的非原生的非原生的非原生的
MAXLINE MAXREPT		COMMON /MISC / IPAGECT(31) , LINECT(31) , IPRTCNT(31) ,
CIEDRE	•	MAXI INF
	• •	- TANKET

SUBROUTINE RKIFM	14/74	OP I = 1		FIN 4.6+42B	83/11/07. 09.41.53	PAGE	265
9	++++	IDATE HEADSR HEADROL REPTYPE(5,31) IHEADER(24)	HEADALT HEADYAW HEADWGT HEADWGT PRILNGT(2) IEVENTS(38)	HEADVEL HEADPIT BIAS PRTWGHT(2) TIMES(38)	•		
æ æ			PRTINDX XYZ(3) YACCEL(3) BIAS PRTMASS	. PKZVEL . SAVTIME . ZACCEL(3) . PRTLNGT			
07 27	C MOMARMS COMMON BLOCK C	: : < C = =	REFLNSA ,URX(6) ,URY(6) ,URZ(6) , ,ZSSOCA(2),XSSORK(6),YSSORK(6),ZSSORK(6), ZSSORKE ,XSSOLRE	URZ(6), (6), ZSSORK(6), E, ZSSORRE	• • •		
09	(e) (e)	. ZSSOSB(6) . ZSSCSAC . ZSSASRP . ZRRSBO(6)	.XSSGSRP .YSSGSRP .YSSGSRP .XSRDAP(2).YRRDAP(2).XRRDAP(2).XSSGCP(2).XSGCP	C .ZRRCSAC . P .ZSSOSRP . ZARMPE . (2).ZRRDAP(2). (2).ZSSOCP(2).			
8 5	+XSDAP(2) +XSRCSAC +XRSDSB +XRRSB +XAACSO +XRSDAC	).ZSSDAP(2). ZSRCSAC. ZRSDSB ZRRSB ZARCSO	.XESOAC .YESOAC .XSSOAC .YSSOAC .XRRSBOT .YRRSBOT .XSSOCH(3).YSSOCH(3) .XASOAC .YASOAC .XSCPAP(2).YSCPAP(2)	YESOAC ZESOAC ; YSSOAC ZSOAC ; YRRSBOT ZRRSBOT ; YSSOCH(3), ZSSOCH(3), YASOAC ZASOAC ; YSCPAP(2), ZSCPAP(2)	•		
06	C INTEGRATION ROUTINE CO C COMMON /RKUTTA /	COMMON BLOCK TIME, TIMES TRAUSA(193)	DELTAT , TRAUSD(193), TRAUCH(97.3)	TRAUSO (193)	• •		
56 05 00	· * * * * * * *	INTSTA INTSTA INTSTA INTSTA INTX INTX INTX INTSTA INTSTA	VECTOR   V	UNTAC(65) UNKPASS IVPRX IVPRX IVPRX IVPRSSX IVPRIX IVPRIX IPPRIX IPPLIX			
105	C TORQUE SEAT/DCCUPANT COMMON BLOCK C COMMON /TORQSD / TLCASO(2) . TLTUBSO .	* *	× 100		• • •		
0 + 1 + 0	• <b>• • •</b>	1LRKSO(6) . 1 TLCHSO(3) . 1 TLAESO . 1 TLDRTSO . 1	IMRKSO(6) INRKSO(6) IMCHSO(3) INCHSO(3) IMAESO INAESO IMDRISO INDRISO	50(6) . 50(3) . 50 .			

```
267
                PAGE
        83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C COMPUTE ROCKET FUEL BURNOFF FROM SEAT/OCCUPANT MASS

CONTROL CONTROL
                                                                                                                                                                                                                                                           FTN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MASSSO * MASSO - RKTIME/RKBURN(I) * MASSRK(I)
0PT=1
74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONTINUE
RETURN
END
        SUBROUTINE RKIFM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
```

SUBROUTINE ROTATE (XFROM, XTO, XSUB, MATRIX, I)

```
C DESCRIPTION - LEVEL 4
C FUNCTION - TRANSFORMS A VECTOR FROM ONE COORDINATE SYSTEM TO
C ANOTHER
                                                                            IN TWO SEPARATE FUNCTIONS, ROTATE SUBTRACTS ONE VECTOR FROM ANOTHER, AND TRANSFORMS THE COORDINATES OF A VECTOR PRESENTED IN ONE COORDINATE SYSTEM, TO ANOTHER COORDINATE SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NON-COMMON VARIABLES DEFINED:
XDIF - DIFFERENCE BETWEEN THE COORDINATES OF THE VECTOR IN
YDIF - THE ORIGINAL COORDINATE SYSTEM AND THOSE IN THE
ZDIF - REQUESTED SYSTEM
                                                                                                                                                          XFOW - VECTOR IN ORIGINAL COORDINATE SYSTEM
XTO - VECTOR IN REQUESTED COORDINATE SYSTEM
XSUB - VECTOR TO BE SUBTRACTED FROM XFRDM
MATRIX - MATRIX USED TO PERFORM THE FRANSFORMATION
I - INDICATES WHETHER THE ORIGINAL MATRIX, OR
ITS TRANSPOSE, SHOULD BE USED
= 1, USE ORIGINAL MATRIX
= 1, USE TRANSPOSE OF ORIGINAL MATRIX
                                                                                                                                                                                                                                                                                                                                                                      CHUTFM.
INITRAJ.
                                                                                                                                                                                                                                                                                                                                                                                                            SEPINIT,
                                                                                                                                                                                                                                                                                                                                                                      CHUINIT.
DYNAMCG.
SEATOCC.
VERTSK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  XTO(2) = MATRIX(1,2) • XDIF + MATRIX(2,2) • YDIF
+MATRIX(3,2) • ZDIF
XTO(3) = MATRIX(1,3) • XDIF + MATRIX(2,3) • YDIF
+MATRIX(3,3) • ZDIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XTO(1) * MATRIX(1,1) * XDIF + MATRIX(1,2) * YDIF + MATRIX(1,3) * ZDIF XTO(2) = MATRIX(2,1) * XDIF + MATRIX(2,2) * YDIF + MATRIX(2,3) * ZDIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YDIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IO XID(1) = MATRIX(1,1) + XDIF + MATRIX(2,1) + YDIF +MATRIX(3,1) + ZDIF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REAL MATRIX
DIMENSION XFROM(3), XIO(3), XSUB(3), MATRIX(3,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                XID(3) = MATRIX(3,1) + XDIF + MATRIX(3.2)
+MATRIX(3.3) + 2DIF
                                                                                                                                                                                                                                                                                                                                                                      AIRCRFT,
DROGUE2,
SEATALN,
UPOVECT,
                                                                                                                                                                                                                                                                                                                                                                      AERFMSO,
DROGUE 1,
RAILFM,
TUBEND,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C POTENTIAL ERROR CONDITIONS: NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      XDIF = XFROM(1) - XSUB(1)
YDIF = XFROM(2) - XSUB(2)
ZDIF = XFROM(3) - XSUB(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1F(1 . EQ. 1) GOTO 10
                                                                                                                                                                                                                                                                                                                                                                           AERFMSA,
                                                                                                                                                                                                                                                                                                                                                                                           DARTFM.
INIVRBL.
                                                                                                                                                                                                                                                                                                                                                                                                                                       SLUGCON,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NONE
                                                                                                                                                                                                                                                                                                                                   COMMUNICATIONS -
                                                                                                                                                                                                                                                                                                                                                        CALLED BY:
                                                                                 METHOD -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GO 10 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ن
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ں
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                     ō
                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
```

5-270

```
METHOD - INTEGRATE THE DYNAMIC OF AND DYNAMIC RESPONSE INDEASE COLOUTIONS OF MOTION RUNGE EMPLOYS THE FOURTH ORDER FUNGE KUTTA METHOD WITH RUNGE'S COEFFICIENTS

TO INTEGRATE A SYSTEM OF N SIMULTANEOUS FIRST ORDER FOR SYSTEM OF NOTIONS FOR THE TOWN OF THE CALLING PROGRAM. THE ROUTINE MUST BE CALLED A TIMES PER STEP (PASS(1) ... PASS(4)) SO THAT THE INDEPENDENT VARIABLE (X) AND THE SOLUTION VALUES (V) TOWN OF THE TOWN OF THE
SUBROUTINE RUNGE(N,Y,F,X,H,IP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DESCRIPTION - LEVEL 3 FUNCTION - INTEGRATE THE DYNAMIC CG AND DYNAMIC RESPONSE INDEX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAVER - SAVES PREVIOUS VALUES OF F(J)
SAVEY - SAVES PREVIOUS VALUES OF Y(J)
Y - SIMULTANEOUS DIFFERENTIAL EQUATIONS
F - DERIVATIVES FOR Y
N - NUMBER OF EQUATIONS
X - PREVIOUS TIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DIMENSION SAVEF(50), SAVEY(50), Y(N), F(N) GO TO (10, 20, 30, 40) IP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H - TIME STEP
IP - PASS COUNTER
POTENTIAL ERROR CONDITIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON-COMMON VARIABLES DEFINED -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAVEF(J) - SAVEF(J)+2.+F(J)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DYNAMCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALLED BY: DRICALC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y(J)=SAVEY(J)+.5+H+F(J)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Y(U)=SAVEY(U)+, 5+H+F(U)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALLS: NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ⊾ Z × I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DO 11 J=1,N
SAVEY(J)=Y(J)
SAVEF(J)=F(J)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMUNICATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DO 22 J±1,N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C PASS 1
C C PASS 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C PASS 2
C C PASS 2
C C CON
                             .
.
                                                                                                                                                                                                                                         ō
                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
```

```
271
   PAGE
  83/11/07. 09.41.53
 FTN 4.6+428
                                                                                                                                                        CONTINUE
DD 44 J=1,N
Y(J)*SAVEY(J)+(SAVEF(J)+F(J))*H/6.0
44 CONTINUE
RETURN
END
                                                             O CONTINUE

DO 33 J=1,N

SAVE(J)-SAVEF(J)+2.0+F(J)

Y(J)=SAVEY(J)+H+F(J)

33 CONTINUE

X=X+ S+H

RETURN
74/74 OPT=1
                           RETURN
                                     C PASS 3
C C PASS 3
                                                                                                                             C PASS 4
C C CONT
SUBROUTINE RUNGE
                                             9
```

70

-	SUBROUTINE SEATALN
us.	30
9	C COMMUNICATIONS - COCKDINAIE STSTEM: COCKDINAIE STSTEM: C CALLED BY: C C C C CALLED BY: C C C C C C C C C C C C C C C C C C C
č.	
50	C CONSTANTS COMMON BLOCK C C C C C C C C C C C C C C C C C C C
52	C DENSITY COMMON BLOCK  C DENSITY COMMON DENSITY / IAIMOS COMMON / DEN
90	C.SEAT ALONE FORCES COMMON BLOCK
ស	FYAESA FZA
<b>Q</b>	•
<b>5</b>	COMMON / ISETALN / XPGSSRP, YPGSSRP, ZPGSSRP, XCGSA , YCGSA , YCSA , YCSSA , YCCSA , Y
20	CISA , COSA , CASA , CASA , CASA , REAL INZSA , INVSA , INZSA , INVSA
រក មា	C MASSES COMMON BLOCK C***********************************

C MISCELLANCOUS BLOCK COMMON MAISC (1904SEC13) COMMON (131) COMMON MAISC (1904SEC13) LINETIA) INACANI (191) COMMON MAISC (1904SEC13) LINETIA) INACANI (191) COMMON MAISC (1904SEC13) LINETIA) COMMON (1904SEC13) COMMON MAISC (1904SEC13) (1904SEC13) COM	MATRIX   DCMAE(3.3)   DCMSA(3.3)	C MATRIX COMMON /MI C MATRIX COMMON /MI C MISCELLANEOUS C MISCELLANEOUS C COMMON /MI					
CONTRICT   COMBACCA   CONTRACTA   COMBACCA   CONTRACTA   COMBACCA   CONTRACTA   COMBACCA   CONTRACTA   COMBACCA   CONTRACTA   COMBACCA   CONTRACTA	COMPACE   COMP	COMMON /M.	BLOCK		:		
DCMSE(3.3)   DCMMAE(3.3)	NEOUS DATA   DIGMARE(3.3)   DIGMARE(3.3)	COMMON /M.	****	******	:	•	
DCMSAE(3.3)   DCMSE(3.3)   DCMSE(3.3)	DCMSAE(3.3)   DCMSE(3.3)   DCMSE(3.3)	C MISCELLANEOUS C MISCELLANEOUS C COMMON /M:	`		MSA(3,3) . MTE(3,3) .		
MANAGE   M	MANEGO   M	C MISCELLANEOUS C MISCELLANEOUS COMMON /M:	DCMSAE(3,3), DCMDUM(3,3)		MSR(3,3)		
MAXRED   IPPRICNI	MAXRED   IPPRICNI	COMMON /MI	DATA COMMON BLDCK		***		
MAXLINE	MAXLINE	+ +		•	1001CN1(34)	•	
TEVLINE   TERFEG   LU	TEVLINE   TERFEG   LU	•	•	MAXREPT	MAXEVNI		
HEADALT   HEADALT   HEADVEL	HEADALT   HEADALT   HEADVEL	•	IEVLINE	IERRFLG	רב		
HEADSR HEADYAW HEADPIT HEADBOL REPTYPE(5,31) PRILNGT(2) PRTWGHT(2) IHEADROL PRIMASS(2) PRIMASS(28) IHAVOC PRIMASS(2) PRIMOX PREME (2) PRIMASS(2) PRIMOX PREME (2) PRIMASS(2) PRIMOX PREME (2) PRIMASS(2) PRIMOX PREME (2) PRIMOS (2) PRIMOS (2) PRILNGT PRIMOS (2) PRIMOS (2) PRILNGT PRIMOS (2) PRIMOS (2	HEADSR HEADYAW HEADPIT HEADBOL REPTYPE(5,31) PRILNGT(2) PRIWET (2) HEADROL PRIMAS(2,31) PRILNGT(2) PRIWET (2) HEADROL PRIMAS(2,31) PRILNGT (3)  YACEL(3) YACEL(3) YACEL(3)  REPTYPE BIAS  REPTYPE BIAS  REPTYPE BIAS  FRIUDX PRIWET  REPTYPE BIAS  FRIUNCT PRIMASS PRILNGT  REPTYPE BIAS  FRIUNCT PRIMASS PRILNGT  FRAJAC(193) TRAJAC(193)	+	IDATE	, HEADALT	. HEADVEL		
HEADROL	HEADROL	+	HEADSR	, HEADYAW	. HEADPIT		
HEADER(24)   FRILNGI(2)   FRIENGI(2)	HEADER(24)   FYELING (2)   FYELING (2)     FRED (24)   FYELINDX   FYELINDX     FRED (24)   FYELINDX   FYELINDX     FRED (24)   FYELINDX   FYELING     FRED (24)   FYELINDX   FYELING     FRED (24)   FYELINDX   FYELING     FRED (24)   FYELING   FYELING     FRED (25)   FYELING     FYELING   FYELING     FYEL	•	HEADROL	•	BIAS		
TREADER (24)   TREADER (25)   TREADER (26)	TREADER (24)   TREADER (24)   TREADER (25)	<b>+</b> •	KEPTYPE (D. 3)	•	FKIWGHI(Z)		
PRIMASS(2)   PRIMBX   PRIME	PRIMASS(2)   PRINDX   PRINCE	• •	INCADER (24)	1 EVENI 3 ( 38 )			
GER REPTYPE (BIAS) (TATELLY)  GER REPTYPE (BIAS) (ACCEL(3) (ACCEL(	GER REPTYPE (BIAS) (TATA)  GER REPTYPE (BIAS) (ACCEL(3)  RAJER	• •	(C)334M100	SPETINGS			
GER REPTYPE (3) 'YACCEL(3) 'ZACCEL(3) 'ZACCEL(3) 'REPTYPE (BIAS PRTUNGT PRAJECT PRETA	GER REPTYPE (3) 'YACCEL(3) 'ZACCEL(3) 'ZACCE	•	TRIMASS(Z)	, raina,	. PREVEL		
GER REPTYPE (BIAS FRLNGT PRILINGT TAGE (BIAS PRILINGT PRILINGT TAGE (BIAS PRILINGT TAGE (BIAS PRILINGT TAGE (BIAS PRILINGT) PRAJECT (BIAS PRILINGT) PRAJECT (BIAS PRILINGT) PRAJECT PRAJECT (BIAS PRILINGT) PRAJECT PRAJEC	GER REPTYPE (BIAS PRILNGT PRACE (193) (TRAJCH (193) (TRAJCH (193) (TRAJCH (193) (TOVE 05 (225) QUATSO (65) (QUATSO (65) (193) (TOVE 05 (225) QUATSO (65) (QUATSO (65) (193) (TOVE 05 (225) QUATSO (65) (QUATSO (65) (193) (TOVE 05 (193) (TO	• •	ZVEC1(3)	(2)	JANULIME .		
PRIMICAL	PRIMICAL	*	AACCEL (3)	. YACCEL(3)	. ZACCEL(3)		
PRIMASS   PRIMAS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRAJEC   PRA	PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMAS   PRIMAS   PRIMAS   PRIMAS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRIMASS   PRASS   PRAS	INIEGER	KEFLYFE	. BIAS	. PRILING!		
ION ROUTINE CDMMON BLOCK  ION /RKUTTA / TIME TIMEB DELTAT TRAJEC(193)   TRAJCA(193)	ION ROUTINE COMMON BLOCK  ION /RKUTTA / TIMEE, TIMEB, DELTAT	•	TOR INC.				
TRAUSA   193	IDN ROUTINE CDMMON BLOCK  DN /RKUTTA / TIME TIMEB DELTAT TRAJSD(193)   TRAJSA(193)   TRAJCH(97.3)   TRAJSA(193)   TRAJCH(97.3)   TRAJSA(193)   TVCEOS(225)   QUATSO(65)   QUATSA(69)   QUATOA(65)   QUATSA(65)   TRAJSA(193)   TVCEOS(225)   QUATSA(65)   TRAJSA(193)   TVCEOS(225)   TVPRAS   TV TX   TVPR   TV TX   TV TX TX   TV TX	•	FRICHE		PRIMOA		
DN /RKUTTA / TIME, TIMEB, DELTAT , TRAJSO(193) , TRAJOA(193) , TVCEOS(225) , QUATSO(65) , QUATAC(65) , QUATACC(65) , QUATACCC(65) , QUATACCCC , QUATAC	DN /RKUTTA / TIME, TIMEB, DELTAT , TRAJSO(193) , TRAJOA(193) , TVCEOS(225) , QUATSO(65) , QUATAC(65) ,	INTEGRAT	+				
DN /RKUTTA / TIME	DN /RKUTTA / TIME	*****	•	*	*******		
TRAJOR(193)   TRAJOR(193)   TRAJOR(197.3)	TRAUSA(193)   TRAUDA(193)   TRAUCH(97,3)     TRAUSA(193)   TRAUDA(193)   TRAUCH(65)     QUATSC(65)   QUATSC(65)     QUATSC(65)   QUATCC(65)     TREPASS   TREPASS   TREPASS   TREPASS     TOTAL   TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL     TOTAL   TOTAL     TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTAL   TOTAL   TOTAL     TOTA	COMMON / Ki	\	•	. TRAJSD(193) .		
TRAIAC(193)   TVCEOS(225)   QUATSO(65)	TRAJAC(193)   TVCEOS(225)   QUATSO(65)	•	TRAJSA( 193)	. TRAJOA(193)	. TRAJCH(97.3) .		
OUNTSA(65)   QUATAC(65)   QUATAC(65)	Marting	*	TRAJAC( 193)	. TVCEQS(225)	. QUATSO(65) .		
INTSTP   IPCPASS   IRKPASS   IPQBINTS   IPQBINTS   ITQPRX   ITQPRX	INTSTP   IPCPASS   IRRPASS   IPQBNTS   IPQBNTS   IPQBNTS   IPQRX   IPQBNTS   IPQRX   I	*	QUATSA(65)	. QUATOA(65)	. QUATAC(65) .		
IPGINTS	IPGINTS	*	INTSTP	. IPCPASS	. IRKPASS .		
IKX	IKX	•	IPOINTS	1YX	. IYPRX		
IVIX	IVIX IVIX IVIX IVIX IVIX IVIX IVIX IVIX	*	IKX	IKSUMX	IKPASSX		
IVERIA   ICVIX   I	IVERIA   ICVIX   ICVIX	•	XIXI	X 1 1 1	IVIOX		
I YPRIZE	I YPRIZE	•	XEIXI	×100×1	1.0071		
ICVIX ICVIX ICVIX IREIN  EAT ALONE COMMON BLOCK  ON /TORGSA / ILAESA TMAESA TNAESA  EVENTS(28) . EQ. O) GDTD 500  EVENTS(31) . EQ. O) GDTD 10  SA(1) = 0.0  NTSTP . EQ. O) GDTD 10  SA(1) = 0.0  NTSTP . IME  S(31) = 11ME	EAT ALONE COMMON BLOCK  EN ALONE COMMON BLOCK  ON /TORGSA / TLAESA , TNAESA  EVENTS(28) , EQ. O) GDTD 500  EVENTS(28) , EQ. O) GDTD 10  NTSTP , EQ. O) GDTD 10  SA(1) = 0.0  NTSTP , EQ. O) GDTD 10  SA(1) = 0.0  NTSTP , EQ. O) GDTD 10  SA(1) = 0.0  NTSTP , EQ. O) GDTD 10  SA(1) = 0.0  NTS(31) = 1  S(31) = TIME	• •	XC1GGA1				
EAT ALONE COMMON BLOCK  EAT ALONE COMMON BLOCK  ON /TOROSA / TLAESA . TMAESA . TNAESA  EVENTS(2B) .EQ. O) GDTG 500  EVENTS(3B) .EQ. O) GDTG 10  NTSTP .EQ. O) GDTG 10  SA(1) = 0.0  NTS(31) = 1  S(31) = TIME	EAT ALONE COMMON BLOCK  EAT ALONE COMMON BLOCK  ON /TOROSA / TLAESA , TMAESA , TNAESA  EVENTS(28) , EQ. O) GDTO 500  EVENTS(31) , NE. O) GDTO 10  SA(1) = 0.0  NTS(31) = 1  S(31) = TIME	• •	(714 XIAUI	×11.			
EAT ALONE COMMON BLOCK  ON /TOROSA / TLAESA , TMAESA , TNAESA  ON /TOROSA / TLAESA , TMAESA , TNAESA  EVENTS(28) , EQ. O) GDTO 500  NTSTP , EQ. O) GDTO 10  NTSTP , EQ. O) GDTO 10  SA(1) = 0.0  NTS(31) = 1  S(31) = 1  S(31) = TIME	EAT ALONE COMMON BLOCK  ON /TOROSA / TLAESA , TMAESA , TNAESA  ON /TOROSA / TLAESA , TMAESA , TNAESA  EVENTS(28) , EQ. O) GDTD 500  EVENTS(31) NE. O) GD TD 500  NTSTP , EQ. O) GDTD 10  RAJSA(4) , GT. O. O) GDTD 10  SA(1) = O. O  NTS(31) = 1  S(31) = TIME		×1-21		NITE		
EVENTS(28) . EQ. 0) GDTD 5: EVENTS(28) . EQ. 0) GDTD 5: EVENTS(31) NE. 0) GDTD 10 NTSTP . EQ. 0) GDTD 10 SA(1) = 0.0 NTS(31) = 1 S(31) = TIME	ON /TORGSA / TLAESA EVENTS(28) , EQ. O) GDTO 5: EVENTS(31) NE. O) GD TO NTSTP , EQ. O) GDTO 10 NTSTP , EQ. O) GDTO 10 SA(1) = O. O NTS(31) = 1 S(31) = TIME	C TORQUE SEAT AL	LONE COMMON BLOCK				
CDMMON / TOROSA / TLAESA . TWAESA . TRAESA . TERESA . TRAESA . TERESA . TER	CDMMON /TOROSA / TLAESA . TWAESA . TRAESA . TERESA . TRAESA . TERESA . TERE		******		**************		
IF(IEVENTS(28), EQ. 0) IF(IEVENTS(31), NE. 0) IF(INTSTP, EQ. 0) GGTO IF(TRAJSA(4), GT. 0.0) IF(TRAJSA(1) = 0.0 IEVENTS(31) = 1 TIMES(31) = TIME GGTG 500	IF(IEVENTS(28), EQ. 0) IF(IEVENTS(31), NE. 0) IF(INTSTP, EQ. 0) GGTO IF(IRAJSA(4), GT. 0.0) IF(IRAJSA(1) = 0.0 IEVENTS(31) = 1 IIMES(31) = TIME			•	SA		
IF (IEVENTS(31) .NE, O) IF (INTSTP . EQ. O) GOTO IF (IRAJSA(4) .GT. O.O) IRAJSA(1) = 0.0 IEVENTS(31) = 1 TIMES(31) = 1 TIMES(31) = TIME	IF(IEVENTS(31) .NE, O) IF(INTSTP .EQ. O) GOTO IF(IRAJSA(4) .GT. O.O) IFAJSA(1) * O.O IEVENTS(31) * 1 TIMES(31) * TIME	116(1	S(28) .EQ. 0) GDTO 50	Q			
IF (INISTP. EQ. 0) GOTO IF (TRAJSA(4) .GT. 0.0) IRAJSA(1) = 0.0 IEVENTS(31) = 1 TIMES(31) = 1 GOTO 500	IF (INISTP. EQ. O) GOTO IF (TRAJSA(4) .GT. O.O) IRAJSA(1) = O.O IEVENTS(31) = 1 TIMES(31) = TIME	IF ( IEVENTS	S(31) .NE. 0) GO TO 5	00			
IF(IMAJSA(4) .GT. 0.0) IFAJSA(1) = 0.0 IEVENTS(31) = 1 TIMES(31) = TIME GOTO 500	IF(IRAJSA(4) .GT. 0.0) IEAJSA(1) = 0.0 IEVENTS(31) = 1 TIMES(31) = TIME GOTO 500	IF (INTSTP	0) 6010				
IRAUSA(1) = IEVENTS(31) TIMES(31) = GOTO 500	KAJSA(1) =   IEVENTS(31)   TIMES(31) =   GOTO 500	IF (TRAUSA)	(0.0 Te				
1EVENIS(31) TIMES(31) ** GOTO 500	1EVENTS(31) TIMES(31) a GOTO 500	IRAUSA(1)					
G0T0 500	G0T0 500	IEVENIS(3)					
		COTO COTO					
	· C						
		Ü					

```
C COMPUTE FORCES AND MOMENTS ON SEAT ALONE

General contract contr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corrections and a second a second and a seco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CALL ROTATE(TRAJSA(5),TRAJSA(14),ZVECT(1),DCMSAE,1)
TRAJSA(20) = TRAJSA(11)
TRAJSA(21) = TRAJSA(12)
TRAJSA(22) = TRAJSA(13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     + +TRAUSA(11)+TRAUSA(7) - TRAUSA(13)+TRAUSA(5)
ZACCEL(3) = FZAESA/WASSSA - GRAVITY+DCMSAE(3,3)
TRAUSA(19) = ZACCEL(3)
+ +TRAUSA(12)+TRAUSA(5) - TRAUSA(11)+TRAUSA(6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TRAJSA(17) = XACCEL(3)
+ +TRAJSA(13)+TRAJSA(6) - TRAJSA(12)+TRAJSA(7)
YACCEL(3) = FYAESA/MASSSA-GRAVITY+DCWSAE(2,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XACCEL(3)=FXAESA/MASSSA-GRAVITY+DCMSAE(1,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CALL ATMOS(TRAJSA(4), DLDALT(3), PRESALT(3))
OLDALT(3) = TRAJSA(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . TRAJSA(11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . TRAJSA(12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . TRAJSA(11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           + TRAUSA(13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRAUSA(18) - YACCEL(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CALL AERFMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IXXSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IXXP
SUBROUTINE SEATALN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           50
```

TAUZ = TRAJSA(11) + (IXYP - IYYQ + IYZR) - TRAJSA(12) +

(IXZR + IXYQ - IXXP) + TNAESA

TRAJSA(24) = ((IZZA + TAUY + C2SA + TAUZ + C3SA)/C4SA)

TRAJSA(23) = ((IZZA + (IZZA + TRAJSA(24)) +

IXZSA + (TAUZ + IXZSA + TRAJSA(24)))/C2SA)

TRAJSA(25) = ((TAUZ + IXZSA + TRAJSA(24)))/C2SA) TAUX = 1RAJSA(12) + (1XZP + 1YZQ - 1ZZR) - TRAJSA(13) + TAUY = IRAJSA(13) + (IXZR + IXYQ - IXXP) - TRAJSA(11) + (IXYP - IYYQ + IYZR) + ILAESA (IXZP + IYZO - IZZR) + TMAESA TRAJSA(24))/1225A) 500 CONTINUE Ü 560 165 170

RE TURN

• TRAJSA(12)

IXYO =

TRAJSA(13) + TRAUSA(12)

#

155

Ü

IXZR IYYQ IYZR

0PT = 1

74/74

SUBROUTINE SEATALN

PAGE

C C CAI C C C C C C C C C C C C C C C C C C C
---

25

90

32

	74/74 OPT=1	<del>.</del>	FTN 4.6+428	83/11/07. 09.41.53	PAGE	277
9	C C3 C C3 C POTENTIAL ERROR CONDITIONS C MASS = O	R CONDITIONS: DIVISION BY ZERO WHEN: MASS = 0				
65	• • • • •	C2-IXYSO+C1-IYZSO+C3) = 0 SAGE IS PRINTED AND THE	•			
0,	C CONSTANTS COMMON BLOCK C+++++++++++++++++++++++++++++++++++	C CONSTANTS COMMON BLOCK C. CONSTANTS COMMON CONSTANT CRAVITY RADDES DEGRAD PI	DEGRAD PI			
75	COMMON /DENSITY /	/ IATMOS OLDALT(3) RHOS TEMPS TEMPS TEMPS AVAIND AVAIND AVAIND AVAIND AVAIND	. RHOS VZWIND	*		
0	C SEAT/OCCUPANT FORCES COMMON BLOCK C COMMON /FORCESO / FXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	C SEAT/OCCUPANT FORCES COMMON BLOCK  C	FYCASO(2), FZCASO(2), FYTUBSO, FZTUBSO,	• • •		
es s	FXAESOLG  FXAESOLG  FXAESO  FXAESO  FXAESO  FXAESO  FXAESO  FXAESO  FXAESO	XRKSOLG) FYRKSOLG) XKKSOLG) KYRKSOLG) KYRKSOLG) KYRKSOLG) KYRKSOLG) KYRKSOLK KYRK KYRKSOLK KYRKSOLK KYRKSOLK KY	F2KSU(6) . F2KSO(6) . F2KSO(3) . F2AESO . F2DRTSO	;•		
) 6	COMMON /ICONTRL /	// // / / / / / / / / / / / / / / / /	. IRESTRT, IUNITS , , IDRIFLG,	•		
8	C SECTION 10 COMMON BLOCK C COMMON /IROCKET / II	X INRKT . RKDELY(8), RKIGN(6). RKWGHT(6), XPOSRK(6). YPOSRK(6), RKALPH(6). RKBETA(6), RKNPTS	RKNPTS(6), IROKOUT , RKBURN(6), TSTAR(6), ZPOSRK(6), RKTHRST(2.25.6)			
\$0 01	C SECTION 6 COMMON BLOCK C COMMON / ISEATOC / IN +	C SECTION 6 COMMON BLOCK  C SECTION 6 COMMON / ISEATOC / IPCNIL , XCGSO , YCGSO , ZCGSO , IXXSO , IXXO , IXXSO , IXXXX	2CGSO . IXXSO	<b>:</b> • :		

<u>n</u>	C MASSES COMMON BLOCK	1 Y 20A 1		
120	COMMON /MASSES / MASSDA1  REAL MASSSA1  REAL MASSSA1  MASSSA2  C.***********************************	MASSOAT MASSOAMASSSA MASSSA MASSA MASSSA MASSA MAS	• •	7 I
130	COMMON /MATRIX / DCMAE(3.3)	/ DCMAE(3,3) . D DCMSE(3,3) . D DCMSE(3,3) . D DCMSAE(3,3) . D DCMDUM(3,3)	DCMRA(3.3), DCMSA(3.3) DCMTS(3.3), DCMTE(3.3) DCMOAE(3.3), DCMSR(3.3)	A(3.3), E(3.3), R(3.3).
135	COMMON /MISC / IPAGE(131) . LINECT(31) . IPRICNI(31) . AXEVNT . MAXEVNT . HEADALT . HEADVEL . HEADVEL . HEADVEL . HEADVEL . HEADPIT . HEADPIT	/ IPAGECT(31) MAXLINE IEVLINE IDATE HEADSR	LINECT(31) MAXREPT IERRELG HEADALT HEADYAW	IPRICNI(31) MAXEVNI LU HEADVEL
140	* * * * <b>*</b> *	HEADROL REPTYPE(5,31) IHEADER(24) PRTMASS(2) ZVECT(3)	. HEADWGT . PRTLNGT(2) . IEVENTS(38) . IMVDC . PRTLNDX . XYZ(3)	BIAS PRTWGHT(2) TIMES(38) PRTEMP(2) PRZVEL SAVTIME
145	AACCEL( INTEGER REFITYPE PRIEMPH PRIEMPH C************************************	<u> </u>	. YACCEL(3) . BIAS . PRIMASS	ZACCEL( PRTLNGT PRTINDX
25 25	COMMON / PARCHUI / IRECOV  COMMON / PARCHUI / IRECOV  *** KECAP  *** NPTSRLS  *** NPTSRTI  *** IDROGUE  *** PARCHUI / IRECOV  *** TRECOV  *** TRECOV	/ IRECOV RECDRAG XRECAP NPTSRLS NPTSRFT IDROGUE POROSD2	TRDPLOY RECOVED YRECAP RECOVLS(2.25) RECOVFT(2,25) RECOVFT(2,25) VELCON DECOVET(2,25)	RECOVIL POROSR ZRECAP IFTRECV SEPFRCE DROGPD2 IFTDRO3
<b>16</b> 0	· • • • •	NF10F12 NP10F11 NP150L5 DISPLOY OROGP01	. DROGF 14(2,25) . DROGLS(2,25) . DROGLL . POROSD 1	IDROGLS TODPLOY DRORAGI
165	••••	YDROGAP CHALT2 AREADC TFP2	ZDROGAP GLIMIT WGHTDC TFP3 NPTSDDT	CHALTI TDELAY TFP1 TDROGLS
071	C INTEGRATION ROUTINE COMMON	COMMON BLOCK		

TRAUDA(193)   TRAUCH(97.3)   TRAUDA(193)   TRAUCH(97.3)   TVCEOS(225)   QUATSCO (65)   QUATSCO (65)   QUATSCO (65)   QUATAC (65)   QUATAC (65)   QUATAC (65)   TVC	TRAUDA(193)   TRAUCH(97.3)   TRAUDA(193)   TRAUCH(97.3)   TVCEOS(225)   QUATSCO (65)   QUATCEOS(225)   QUATCEOS(225)   QUATCEOS(225)   TVCEOS(225)   TVCEO	TRAJAC(193)	COMMON /RKUTTA	\	•	•	TRAJSO(193)	
TVCEOS(225) : QUATSO(65) : QUATOA(65) : QUATOA(65) : QUATAC(65) : IRRPASS : IRRPASS : IRRPASS : IVAN	TVCEOS(225)	TVCEOS(225) : QUATSO(65) : QUATOR(65) : QUATAC(65) : QUATAC(65) : QUATAC(65) : TRKPASS : TRKPASS : TRKPASS : TRKPASS : TRKPASS : TRKPASS : TRY 1	•	TRAUSA(193)	TRAJOA(19	•	JCH(97,3)	
QUATOA(65)   QUATAC(65)     IPCPASS   IRRPASS     IYAX   IYPRX     IYIX   IYPRX     IYIX   IYPRIX     IYPX   IYPRIX     IPYIX   IPYRIX     IPYRIX	QUATOA(65)   QUATAC(65)     IPCRASS   IRRPASS     IVPRX   IVPRX     IVSUMX   IVPRX     IV11X   IVPR11X     IVPN   IV   IV     IVPN   IV     IVPN   IV   IV     IVPN   IV     IV   IV     IVPN   IV     IV   IV     IVPN   IV	QUATOA(65)   QUATAC(65)     IPCPASS   IRRPASS     IVAX   IVPRX     IVSUMX   IVPRX     IV11X   IVPR11X     IVP1X   IPVR11X     IVPX   IPVR11X     IVPX   IPVR11X     IVPX   IPVR11X     IVPX   IPVR11X     IVPX   IPVR11X     IVPX   IVPR     IVPX   IVPR     IVPX   IVPR     IVPX   IVPX	+	TRAJAC(193)	. TVCEQS(22	· -	1750(65)	
IPCPASS   IRKPASS   INPRX   IVPRX   IVPRX   IVPRX   IVPRX   IVPRX   IVPRX   IVPR   IV   IV   IV   IV   IV   IV   IV   I	IPCPASS   IRKPASS   IVARX   IVAX	IPCPASS   IRKPASS   IVAN	+	OUATSA(65)	OUATOA (65	•	TAC(65)	
IVX	IVX	IVX		TAITETE	1004001	•	DACC	
KSUMX	IKSUMX	IKSUMX	•		50KL)		7	
MSSUMX   MSPASSX   1   1   1   1   1   1   1   1   1	MSUMX   1KPASSX   1K11X   1V12X   1V11X   1V12X   1V	MSUMX   1KPASSX   1KPL1X   1V12X   1V11X   1V12X   1	•	SINTON	117		¥	
IVIIX	1   1   1   1   1   1   1   1   1   1	IVIIX	*	XX	. IXSCMX		ASSX	
IYPRIX	IVPRIX	1	*	1 × 1 ×	. 1Y1 1X	IAI .	5×	
IPY1X	IPY1X	IPY1X	•	1V13X	TYPRIX	IVP	221 tX	
CYIIX   FEIN	MCASO(2) TNCASO(2) MTUBSO TNTUBSO TNTU	CYIIX   FEIN		2002				
MCASO(2), TNCASO(2), MTUBSO (1704 SO (2), MTUBSO (1704 SO (6), MSLSO(6), TNSLSO(6), MRKSO(6), TNRKSO(6), MRKSO(6), TNCKSO(6), MRKSO(6),	MCASO(2), TNCASO(2), WASO(2), WASO(2), TNCASO(2), WASLSO(6), TNTASO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNAESO, TNAE	MCASO(2), TNCASO(2), MUBSO (MALSO(6), TNCASO(2), MALSO(6), TNTASO(6), MARSO(6), TNAFSO(6), TNAFSO(6	•	V 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7111	-	<u> </u>	
MCASO(2) , INCASO(2) . MTUBSO , INTUBSO . MRLSO(6) , INSESO(6) . MRKSO(6) , INAKSO(6) . MCHSO(3) , INCHSO(3) . MAESO . INDRISO .  MAESO . IN	MCASO(2) , INCASO(2) , MIUBSO , INTUBSO , INTUBSO , MIUBSO , INTUBSO , MIUBSO , INTUBSO , MKESO(6) , INCKSO(6) , MKESO(6) , INCHSO(3) , INCHSO(3) , INCHSO(3) , INDRISO , INDRIS	MCASO(2) , INCASO(2) , MTUBSO , MTUBSO , INTUBSO , MTUBSO , MTUBSO , MKSO(6) , MKSO(6) , MKSO(6) , MKSO(6) , MKSO(6) , MAESO , INDETSO , INDETSO , MAESO , MAE	•	ICAIX	•	٠	2	
MCASO(2) (TNCASO(2) (MTUBSO (TNTUBSO (TNTUBSO (TNTUBSO (TNTUBSO (TNTUBSO (TNCHSO(6) (TNCHSO(6) (TNCHSO(3) (TNCHSO(3) (TNCHSO(3) (TNCHSO(3) (TNCHSO (TN	MCASO(2) TNCASO(2) MTUBSO MSLSD(6) TNTUBSO MSLSD(6) TNRKSO(6) TNRKSO(6) MRESO MRESO MRESO TNAFSO MAESO MORTSO TNAFSO MORTSO MAESO MAESO MAESO MORTSO MAESO M	MCASO(2) (TNCASO(2) (MTUBSO (MTUBBSO (MT	C*************************************		••••••	٠	********	•
MCASO(2), TNCASO(2) MTUBSO (TNCASO(2) MNSLSO(6), TNUSO(6) MRKSO(6), TNRKSO(6) MRKSO(6), TNCHSO(3) MRESO (TNCHSO(3) MRESO (TNCHSO(3) MRESO (TNCHSO(3) MRESO (TNCHSO(3) MRESO (TNCHSO(3) MRESO (TNCHSO(3) MRESO (3) + FYCHSO(3) GT SOSEP AND	MCASO(2), TNCASO(2) MTUBSO, TNVASO(6) MRSLSO(6), TNSLSO(6) MRKSO(6), TNRKSO(6) MRKSO(6), TNRKSO(6) MARESO, TNAESO MARESO, TNAESO MARTSO, TNAE	MCASO(2), TNCASO(2) MTUBSO, TNCASO(2) MNSLSO(6), TNTUBSO, MSLSO(6) MRKSO(6), TNRKSO(6) MRKSO(6), TNRKSO(6) MRKSO(6), TNCHSO(3) MAESO, MAE	C TOROUE SEAT/OCCL	PANT COMMON BLOCK				
MCASO(2), TNCASO(2), MTUBSO MSLSO(6), TNSLSO(6), MCKSO(6), TNRKSO(6), MCKSO(6), TNRKSO(6), MAESO MAESO TNAESO MAESO MAESO TNAESO MAESO MAESO TNAESO MAESO MAESO TNAESO MAESO TNAESO MAESO MAESO TNAESO MAESO TNAESO MAESO TNAESO TNAESO TNAESO TNAESO TNAESO MAESO TNAESO TN	MCASO(2), TNCASO(2) MTUBSO MSLSO(6), TNSLSO(6) MCHSO(3), TNCHSO(6) MCHSO(3), TNCHSO(6) MAESO MAESO MAESO TNDRTSO	MCASO(2), TNCASO(2) MTUBSO MSLSO(6), TNTLUBSO MSLSO(6), TNTLUBSO MCHSO(3), TNCHSO(6), MCHSO(3), TNCHSO(3), MAESO MAESO MAESO MAESO TNCHSO(3) TNCHS	***************************************		*********	******	• • • • • •	• • • • •
MTUBSO (MSLSO(6)	MTUBSO TANTUBSO MSLSO(6) MRKSO(6) TNSLSO(6) MRKSO(6) TNRKSO(6) MRKSO(6) TNRKSO(3) MKESO TNRKSO(3) TNCHSO(3) TNCHSO(3) TNCHSO(3) TNCHSO MDRTSO TNORTSO TNORTSO TNORTSO TNORTSO TOOO  EPARATION  GT SOSEP AND.	MTUSSO, TNTUBSO, MSLSO(6), TNSLSO(6), MRKSO(6), TNSLSO(6), MRKSO(6), TNSLSO(6), MKRSO(6), TNCKSO(6), TNCKSO(6)	JOUL / NOWING	(6)(345)(1)	TWCACO(2)	TAICACOLO		
MSL 50(6)   TNSL 50(6)   MRK 50(6)   TNRK 50(6)   MRK 50(6)   TNCH 50(6)   MAE SO	MSLSO(6)   TNSLSO(6)   MSLSO(6)   MRKSO(6)   TNRKSO(6)   MRKSO(6)   MRKSO(6)   MRKSO(6)   MRKSO(6)   MRKSO(3)   TNCHSO(3)   MRKSO   TNCHSO   MRKSO   TNCHSO   MRKSO	MSLSO(6)   TNSLSO(6)   MRKSO(6)   TNRKSO(6)   MRKSO(6)   TNCHSO(3)   MAESO   TNAESO   MORTSO   TNAESO	TOTAL NORMAN	•	100000	100000	•	
MSL SO(6), TNSL SO(6) MSR SO(6), TNRK SO(6) MCHSO(3), TNRK SO(6) MCHSO(3), TNRK SO MCH SO TNDR TSO TND	MSLSG(6), TNRSSG(6) MCHSO(3), TNRKSO(6) MCHSO(3), TNRKSO(6) MCHSO(3), TNRKSO(6) MCHSO(3), TNRESO MCHSO(3), TNRESO MCHSO(3), TNRESO MCHSO(3), TNRESO MCHSO(3), TNRESO MCHSO(3), TNCHSO(3) M	MSL SO(6), TNSL SO(6) MSR SO(6), TNRK SO(6) MCHSO(3), TNRK SO(6) MAE SO MAE SO TNDR T SO TNDR TNDR T SO TNDR TNDR T SO TNDR TNDR T SO TNDR TNDR T SO TNDR TNDR T SO TNDR TNDR T SO TNDR TN	•	10,10850	I MINESO	US OF INTERIOR	-	
MM \$50 (8) TNRK\$0(8) MMA \$50 TNAF\$0(3) MMA \$50 TNAF\$0  GT \$0\$EP AND.	MRKSO(6), TNRKSO(6) MAFSO MAFSO MAFSO MAFSO MAFSO MARTSO TAME SO MAFSO MAFSO MARTSO TAME SO MAFSO MAFS	MRKSO(6) TNRKSO(6) MAESO TNAESO MAESO TNAESO MAESO TNAESO MAESO TNAESO MAESO TNAESO MAESO TO	*	11.51.50(6)	IMSLS0(6) .	INSTSD(6)		
MCHSO(3), TNCHSO(3), MAESO MORTSO TAMESO XYO, IXYP,  COO  EPARATION  GT SOSEP AND.	MCHSD(3), TNCHSD(3), MAESO MDRTSO TAMESO XYO,IXYP.  RAJECTORY  EPARATION GT SOSEP AND.	MCHSQ(3), TNCHSQ(3), MAESQ MDRTSQ TAMESQ MORTSQ TAMESQ XYQ,IXYP.  RAJECTORY  EPARATION GT SOSEP AND.  GT SOSEP AND.	•	TLRK50(6)	TMRKS0(6)	TNRKSO(6)		
MAESO TNAESO  MORTSO TNDRTSO  XYQ.IXYP.  OOO  BAJECTORY  EPARATION  GT SOSEP AND.	MAESO TNAESO  WORTSO TNDRISO  XYQ.IXYP.  RAJECTORY  EPARATION  GT SOSEP) GOTOZO  GT SOSEP AND.	MAESO TNAESO  XYQ, IXYP,  DOO  BAJECTORY  EPARATION  GT SOSEP AND.	•	TLCHSO(3)	TMCHS0(3)	TNCHSO(3)		
MORTSO TABRISO  XYQ, IXYP,  000  EARATION  GT SOSEP) GOTO20  GT SOSEP AND.	MORTSO TADRISO  XYQ. IXYP.  RAJECTORY  EPARATION  GT SOSEP AND.	MORTSO TNORTSO  XYQ, IXYP,  OOO  EARATION  GT SOSEP) GOTG20  GT SOSEP AND.	•	TIAESO	TMAFSO	TNAFSO	•	
XYQ.IXYP.  RAJECTORY  EPARATION  GT SOSEP) GOTO20  GT SOSEP AND.	XYQ. IXYP.  RAJECTORY  CAT SOSEP AND.	XYQ.IXYP.  RAJECTORY  EPARATION  GT. SOSEP) GOTOZO  GT. SOSEP AND.	• •	1100150	THOUTSO	TNDRTSO	-	
MAJECTORY  EPARATION  GT SOSEP AND.	COO  EPARATION  GI SOSEP AND	MYQ, IXYP,  BALECTORY  FPARATION  GT SOSEP AND.						
000  RAJECTORY  EPARATION  GT SOSEP) GOTO20  GT SOSEP AND.	000  RAJECTORY  EPARATION  GT SOSEP ) GOT020  GT SOSEP AND.	000  RAJECTORY  EPARATION  GT SOSEP) GOTG20  GT SOSEP AND			4117			
##JECTORY  EPARATION  GT SOSEP AND.	##JECTORY	PAJECTORY  EPARATION  GT SOSEP AND.	REAL MASS. IX	ZP. IYZQ. IZZR. IXXP.	IXYO. IXYP.			
######################################	######################################	######################################	+ IXZR.IV	YQ, 1Y2R				
PAJECTORY •  EPARATION •  EOG 3 + FYCHSQ(3) • FYCHSQ(3)  GT SOSEP AND	### ##################################	## SOSEP   COMPAND   COMPA		•				
FAJECTORY • • • • • • • • • • • • • • • • • • •	EPARATION FYCHSQ(3) 6 FYCHSQ(3) 61 SOSEP AND.	RAJECTORY	:	00 10 100				
FARATION	RAJECTORY •  EPARATION •  GT SOSEP AND.	FAMECTORY  EPARATION  GI SOSEP) GOTG20  GT SOSEP AND	IF (IEVENIS)	28) .NE. O) GO 10	2000			
EPARATION	EPARATION  EPARATION  GT SOSEP AND.	EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND.	IF(INISTP .E	0. 0) 6010 25				
EPARTION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND.	#AJECTORY  EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND.	FAJECTORY  EPARATION  G(3) + FYCHSO(3) + FYCHSO(3)  GT SOSEP AND		******	**********	********	*****	
EPARATION	G(3) + FYCHSQ(3) • FYCHSQ(3)  GT SGSEP AND.	EPARTION		24 80 800 24 800 147	70.000		•	
EPARATION	EPARATION	EPARATION		VELUCITY FOR PEAK	I KAUECI UKY		•	
EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND.	EPARATION	EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP ) GOTG20		*************	**********	********	******	
EPARATION	EPARATION	EPARATION	U					
EPARATION	EPARATION	EPARATION	PKZVEL = TRAUS	0(16)				
EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND.	EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SGSEP ) GGTG20	EPARATION  0(3) + FYCHSO(3) • FYCHSO(3)  GT SOSEP ) GOTOZO						
6(3) + FYCHSQ(3) + FYCHSQ(3) GT SOSEP AND.	EPARATION	EPARATION  D(3) + FYCHSO(3) • FYCHSO(3)  GT SOSEP AND.						
EPARATION	EPARATION  D(3) + FYCHSD(3) • FYCHSD(3)  GT SOSEP) GOTO20  GT SOSEP AND.	EPARATION  G(3) + FYCHSG(3) + FYCHSG(3)  GT SOSEP AND			*********	******	******	
G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP) GOTO20 GT SOSEP AND.	G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP) GGTG20 GT SOSEP AND	GT SOSEP) GOTO20	CHECK FOR	CCUPANT IMPACT OR	SEPARATION		•	
D(3) + FYCHSD(3) + FYCHSD(3) GT SOSEP) GDTD20 GT SOSEP AND.	6(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP)) GOTO20 GT SOSEP AND.	D(3) + FYCHSD(3) + FYCHSD(3) GT SOSEP) GOTO20 GT SOSEP AND				*********	*****	
G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP) GOTO20 GT SOSEP AND.	D(3) + FYCHSD(3) + FYCHSD(3)  GT SOSEP) GDTD20  GT SOSEP AND:	GT SOSEP)) GOTO20						
D(3) + FYCHSO(3) + FYCHSO(3) GT SOSEP) GOTO20 GT SOSEP AND.	G(3) + FYCHSO(3) + FYCHSO(3) GT SOSEP) GOTO20 GT SOSEP AND	D(3) + FYCHSO(3) • FYCHSO(3) GT SOSEP) GOTO20 GT SOSEP AND.	IF (TRAUSO(4)	5	•			
G(3) + FYCHSG(3) + FYCHSG(3) GT SGSEP) GGTG2O GT SOSEP AND	GT SOSEP) GOTO20	D(3) + FYCHSD(3) + FYCHSD(3) GT SOSEP)) GOTO20 GT SOSEP AND.	TRAJSO(1) -	0 0				
G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP) GOTO2O GT SOSEP AND	G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP AND.	G(3) + FYCHSG(3) + FYCHSG(3) GT SGSEP) GGTG20 GT SGSEP AND.	1575415(20)					
G(3) + FYCHSG(3) + FYCHSG(3) GT SGSEP) GGTG2O GT SOSEP AND	G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP)) GOTO20 GT SOSEP AND.	O(3) + FYCHSO(3) + FYCHSO(3) GT SOSEP) GOTO2O GT SOSEP AND	LEVENIS (AB)	- :				
G(3) + FYCHSG(3) + FYCHSG(3) GT SOSEP) GOTO20 GT SOSEP AND.	G(3) + FYCHSG(3) + FYCHSG(3) GT SGSEP) GGTG20 GT SOSEP AND:	G(3) + FYCHSO(3) + FYCHSO(3) GT SOSEP) GOTO20 GT SOSEP AND						
D(3) + FYCHSO(3) • FYCHSO(3) GT SOSEP) GDT020 GT SOSEP AND.	D(3) + FYCHSD(3) • FYCHSD(3)  GT SOSEP) GOTO20  GT SOSEP AND	D(3) + FYCHSD(3) • FYCHSD(3) GT SOSEP AND.	6010 5000					
D(3) + FYCHSD(3) + FYCHSD(3) GT SOSEP AND	GT SOSEP AND.	GT SOSEP) GOTOZO  GT SOSEP AND.	CONT					
GT SOSEP AND.	GT SOSEP AND	GT SOSEP AND.	- 10000		DUNE A COUR			
GT SOSEP.) GOTO20	GT. SOSEP) GOTO20	GT SOSEP) GOTO20	ij	(LACHSU(3)	13U(3) + FICH			
GT SOSEP AND:	GT SOSEP AND.	GT SOSEP AND.	_	• F2				
GT SOSEP AND	GT SOSEP AND	GT SOSEP AND			5	)) GOTO20	_	
				2 AND PEOPLE	7	9		
• • • • • • •	• • • • • • • • •			TOWN TO SO				
		• • • • • • • • • • • • • • • • • • •	+ IEVENIS(24	ž				
•			G010 25					
	•		U					
•		• • • • • • • • • • • • • • • • • • •	20					
		•	110000000000000000000000000000000000000					
•				J M I				
• • • • • • • • • • • • • • • • • • • •	•	•	0010 5000					
************	•	•						
************	•		•					
******************	***********	* • • • • • • • • • • • • • • • • • • •						
	C COMMITTE WILL COMMODIFIED THE PERCE	C COMPUTE VELOCITY COMPONENTS IN EFCS	٠		።	*******		:::

```
CALL ROTATE(TRAJSO(5),TRAJSO(14),ZVECT(1),DCMSE,1)
TRAJSO(20) = TRAJSO(11)
TRAJSO(21) = TRAJSO(12)
TRAJSO(22) = TRAJSO(13)
                                                                                                                        CALL ATMOS(TRAJSO(4), OLDALT(1), PRESALT(1))
OLDALT(1) = TRAJSO(4)
CALL RAILFM
CALL CATAFM
CALL TUBEND
CALL TUBEND
CALL AERFMSO
CALL DARTFM
CALL RKTFM
CALL RKTFM
CALL CHTSK
CALL RKTFM
                                                                                                                                                                                                                                                                                                                                                                                                  TLSO = TLAESO + TLDRTSO + TLTUBSO
TMSO = TMAESO + TMDRTSO + TMTUBSO
TNSO = TNAESO + TNDRTSO + TNTUBSO
                                                                                                                                                                                                                                                                                                                                             FX = FXAESO + FXDRISO + FXTUBSO
FY = FYAESO + FYDRISO + FYTUBSO
FZ = FZAESO + FZDRISO + FZTUBSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UO 40 I = 1,6
FX = FX + FXSLSO(I) + FXRKSO(I)
FY = FY + FYSLSO(I) + FYRKSO(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TLSO = TLSO + TLCASO(I)
TMSO = TMSO + TMCASO(I)
TNSO = TNSO + TNCASO(I)
CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1LSO = 1LSO + 1LCHSO(1)
1MSO = 1MSO + 1MCHSO(1)
1MSO = 1NSO + 1NCHSO(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D0 35 I = 1,3
FX = FX + FXCHSO(I)
FY = FY + FYCHSO(I)
FZ = FZ + FZCHSO(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FX = FX + FXCASO(1)
FY = FY + FYCASO(1)
FZ = FZ + FZCASO(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                             DO 30 I = 1.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35
                                                                                                                                                                                                                                                                                                                                                                                         Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ပ
                                                                                                                                 240
                                                            235
                                                                                                                                                                                                      245
                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         280
                                                                                                                                                                                                                                                                                                                                               255
                                                                                                                                                                                                                                                                                                                                                                                                                      260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             285
```

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                                                                             •••••••••••••••••••••••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FIN 4 6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAUY = TRAJSO(13) + (IXZR + IXYO - IXXP) - TRAJSO(11) + (IXZP + IYZQ - IZZR) + TMSO
TAUZ = TRAJSO(11) + (IXYP - IYYO + IYZR) - TRAJSO(12) + (IXXP + IXYQ + IXZR) + TNSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IAUX = TRAJSO(12) + (IXZP + 1YZQ - 1ZZR) - TRAJSO(13)
                                                                                                                                                                                                                                                                                                                               IF(MASSSD .LE. O. D) GDTO 75

XACCEL(1)=YACCEL(1)=ZACCEL(1)=0.

TRAJSO(17) = TRAJSO(18) = TRAJSO(19) = 0.0

IF (IEVENTS(37) .NE. O) GO TO 63

CALL ROTATE(TRAJSO(17), TRAJSO(17), ZVECT(1), DCMSA,O)

XACCEL(1) = TRAJSO(18)

ZACCEL(1) = TRAJSO(19)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ONA. O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         XGRAV = GRAVITY+DCMSE(1,3)
YGRAV = GRAVITY+DCMSE(2,3)
ZGRAV = GRAVITY+DCMSE(2,3)
ZGRAV = GRAVITY+DCMSE(3,3)
IF (IEVENTS(37) : E0. 0) XGRAV = YGRAV = 0.0
IF (IEVENTS(1) : E0. 0) ZGRAV = 0.0
IF (IEVENTS(1) : E0. 0) ZGRAV = 0.0

+ ZGRAV : GT : (FZ/MASSSO)) ZGRAV = FZ/MASSSO
XACCEL(1)**XACCEL(1)*FX/MASSSO-XGRAV
TRAJSO(13) = XACCEL(1)

+ TRAJSO(13)*TRAJSO(6) - TRAJSO(12)*TRAJSO(7)
YACCEL(1) = YACCEL(1)+FY/MASSSO-YGRAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    + +1RAJSO(11)+1RAJSO(7) - 1RAJSO(13)+1RAJSO(5)
ZACCEL(1) = ZACCEL(1)+F2/MASSSO-ZGRAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         + +TRAJSO(12)+TRAJSO(5)-TRAJSO(11)+TRAJSO(6)
                                                                                                          TLSO = TLSO + TLSLSO(1) + TLRKSO(1)
TMSO = TMSO + TMSLSO(1) + TMRKSO(1)
TNSO = TNSO + TNSLSO(1) + TNRKSO(1)
                                                              FZ - FZ + FZSLSO(1) + FZRKSO(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       +(IXYP - IYYQ + IYZR) + TLSO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IX2P = IX2SO = TRAJSO(11)
IY2O = IY2SO = TRAJSO(12)
IZZR = IZSSO = TRAJSO(13)
IXXP = IXXSO = TRAJSO(11)
IXYP = IXYSO = TRAJSO(12)
IXZR = IXZSO = TRAJSO(12)
IYYO = IYYSO = TRAJSO(12)
IYZR = IXZSO = TRAJSO(13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRAJSO(18) = YACCEL(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRAJ50(19) . ZACCEL(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C ANGULAR MOMENTUM EQUATIONS
0PT = 1
74/74
                                                                                                                                                                               CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONTINUE
SUBROUTINE SEATOCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
                                                                                                                                                          280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340
                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         335
```

```
U U
```

TRAJSO(23) * TRAJSO(24) * TRAJSO(25) * 0.0 IF (IEVENTS(37) .EO. 0) CALL ROTATE(TRAJAC(23),TRAJSO(23),ZVECT.DCMSA,O) TRAJSO(24) * ((TAUX * C1SO + TAUY * C2SO + TAUZ * C3SO) / C4SO) +	TRAJSO(24) ((IZZSO • (TAUX + IXYSO • TRAJSO(24)) + TRXSO • (TAUZ + IYZSO • TRAJSO(24))) / C2SO) + TRAJSO(23) ((TAUZ + IXZSO • TRAJSO(23) + IYZSO •	+ TRAJSO(24)) / 122SO) + TRAJSO(26) GOTO 5000 C	C FATAL ERROR MESSAGES  Consequence (Consequence (Consequ	C	
C TRAUSO(23) * TRAUSO 1F (IEVENTS(37) .EO + CALL ROTATE(TRA TRAUSO(24) * ((TAUX + CASO)	+ TRAUSO(23) = (12250 + (12250 + (12250 + (12250 + (12250 + (12250 + (12250 + (1225) + (1222 + 1225) + (1222 + 1225)	GOTO 5000 C	C FATAL ERROR MESSAGES  C***********************************	C*************************************	1000 CONTINUE  ERRFLG * 1  C  5000 CONTINUE  RETURN  END
345	350	385 5	360	365	370

* * *	INTEGER	PRTMASS(2) ZVECT(3) XACCEL(3) REPTYPE	, PRTINDX , XYZ(3) , YACCEL(3)	PKZVEL SAVTIME ZACCEL(3) PRILNGI		
C INTE	PRIMGHT + PRIEMP ************************************	PRIWGHT PRIEMP ************************************	PRTMASS	+ PRTWGHT , PRTMASS , PRTINDX + ************************************	••	
	COMMON /RKUTTA / TIME , TIMES , DELTAT , TRAJSO(193) + TRAJOA(193) , TRAJOA(193) , TRAJOA(193) , TRAJOA(193) , TVCEQS(225) , QUATSO(65) + QUATSA(65) , QUATOA(65) , QUATOA(65) + INTSTP , IPCPASS , IRKPASS	TIME TIMES TIMES TRAJSA (193) TRAJAC (193) QUATSA (65) INTSTP	DELTAT TRAUDA(193) TVCEQS(225) QUATDA(65)	TRAJSO(193) TRAJCH(97,3) QUATSO(65) QUATSO(65) IRKPASS	•	
. + + + + + +		IPOINTS IKX IVIX IVI3X IVPRIZX ICVIX	IYX IKSUMX IVIIX IPPIX ICYIIX	IYPRX IKPASSX IVI2X IYPR11X IPV11X		
C AERO	C AFRODYNAMICS INFORMATION COMMON BLOCK	ION COMMON BLO	CK		•	
* * * *	COMMON /AEROGFS /	SAALPH S SAALPH S SOALPH S CXOA CYOA	DABETA DAVEL SABETA SAVEL SOBETA SOVEL OA CZOA CLOA	DAVEL DAMACH SAVEL SAMACH SOVEL SOMACH CLDA CMOA CNOA CLSA CMSA CNSA		
CSEAT	CXSD CYSD CYSC CYSC CYSC COMMON BLOCK	CXSD CYSD	CZSO , CLSO , CMSO	50 , CMS0 , CNS0	•	
* + + + + * * *	COMMON /FORCESD /	FXCASO(2), F FXTUBSO, F FXSLSO(6), F FXRKSD(6), F FXCHSO(3), F	FYCASO(2) FZG FYTUBSD FZG FYSLSO(6) FZG FYRKSO(6) FZG FYCKSO(3) FZG	COMMON /FORCESD / FXCASO(2), FYCASO(2), FZCASO(2), FZCASO(2), FXTUBSO, FXTUBSO, FXTUBSO, FXSLSO(6), FYSLSO(6), FZSLSO(6), FXSLSO(6), FYRKSO(6), FZRKSO(6), FXCKSO(6), FXCKSO(6), FXCKSO(3), FXCKSO(3), FXCKSO(3), FXCKSO(3),	* *	
C. TORQ	+ FXAESO FYAESO FYAESO FZAESO C++++++++++++++++++++++++++++++++++++	FXAESO F FXDRTSO F	FYAESO FZI FYDRTSO FZI	FZAESO FZDRTSO	• •	
• • • • • •	CDMMDN /TDROSD /	/ TLCASO(2) , T TLTUSSO , T TLTUSSO (6) , T TLCHSSO (6) , T TLCHSSO (7) , T	TMCASO(2), TMC TMTUBSO, TNI TMTSC(6), TNI TMRKSO(6), TNI TMCHSO(3), TNI TMAESO	COMMON / TOROSO / TLCASO(2), TMCASO(2), TNCASO(2), TNCASO(2), TNCASO(2), TNTUBSO . TNTUBSO . TNTUBSO . TLSLSO(6), TMSLSO(6), TNSLSO(6), TNSLSO(6), TNSLSO(6), TNSLSO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNRKSO(6), TNCHSO(3), TLCHSO(3), TNCHSO(3), TNCHSO(3), TNAESO . TNAESO . TNAESO . TNAESO . TNAESO	<b>:</b>	
÷ 00	IF(INISIP .EQ. 0) IF(IEVENIS(28) .EI IF(IPHASE3 .GT. 0 IREIN	TLDRTSO , TMD O) GO TO 9999 .EQ. O) GO TO 9999 O) GO TO 100	RTS0 .	TNDRTSO		

```
285
   83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Connected to the connec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C. SET OCCUPANT ALONE ANGULAR VELOCITIES TO ZERO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FIN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LATEST VALUES OF ALTITUDE AND PRESSURE ALTITUDE FOR BOTH OCCUPANT/ALONE AND SEAT/ALONE EQUAL TO LATEST VALUES OF ALTITUDE AND PRESSURE ALTITUDE FOR SEAT/OCCUPANT
                                                                                                                                                                                                                                                      C SET OCCUPANT/ALONE AND SEAT/ALONE FOUATIONS OF MOTION FOUAL C TO SEAT/OCCUPANT FOUATIONS OF MOTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OLDALT(3) * OLDALT(2) * OLDALT(1)
PRESALT(3) * PRESALT(2) * PRESALT(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L = IFIX(1.E6-TIMES)

K = IFIX(1.E6-(DIPHAS3-P13+5.E-10))

IF(MOD(1.K) NE. O) GOTO 9999

PRTFRQ > P13

D0 200 1=1,31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRAJOA(I) * TRAJSA(I) = TRAJSO(I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     L=IFIX(1:E6-TIME5)
K=IFIX(1:E6-(DTPHAS3+B:E-10))
IF (MOD (1,K).NE.O) GO TO 9999
IPHASE3 = 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IF (IPHASE3 .GT. 1) GD TD 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF (IPHASE3 .GT. 2) GOTO 9989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IF(ISEATTR .EQ. 0) GO TO 50
TRAJSA(1)* 12.0
QUATSA(1)* 4.0
DO 20 I=2,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DD 30 I=1,3
DC 30 J=1,3
DCMSAE(1,J) = DCMSE(1,J)
30 CONTINUE
CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPRTCNT(1) . PRTFRQ - 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QUATSA(1) = QUATSO(1)
CONTINUE
       0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DELTAT * DIPHAS3
CONTINUE
                                                                                                                                 TRAJOA(1)= 12.0
       74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                       00 10 1=2, 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IPHASE3 = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200 CONTINUE
       SUBROUTINE SEPINIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C SET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ပ
                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                         115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             165
```

SUBROUTINE SEPINIT 74/74	14/74	_	0PT=1	FIN 4.6+428	83/11/07.	83/11/07. 09.41.53	PAGE	286
C SET AEROD	• 6	VNAMIC	OEFFICIENTS FOR	C	:			
•	•			***************************************	•			
CXSO * CYS		·	C250 * CLS0 * C	* CYSO * C250 * CLSO * CMSO * CNSO * 0.0000				
C SET SEAT/OCCUP	/accup	AN	FORCES AND MOME	OCCUPANT FORCES AND MOMENTS EQUAL TO ZERD	• •			
		. AE	SO - FZAESO - TL.	FXAESO = FYAESO = FZAESO = TLAESO = TWAESO = TNAESO = 0.0 Return End	•			

PAGE

0P1 - 1

74/74

SUBROUTINE SLUGCON

ō

ē

CATANA VAMINO VAMINO VAMINO RHOS C SECTION 4 COMMON BLOCK

9

35

5

S

33

C SECTION + COMMON BLOCK DENSITY, NPISAAT, AAT(4,50), NPTSLAT, LAT(4,50), YAW YAW PVEL CKPITHI . PRESSUR, ZACVEL . XPOS . XTAIL . ZTAIL . STAIL . BOLL . RVEL . OVEL . WINDY . WINDZ . XACVEL IACSFLG P1 TCH WINDX COMMON /IAIRCRT / TEMP

COMMON / ICONTRL / TSTART , TSTOP , ESTOP , IRESTRT. TUNITS ,

5-288

52

9

0000000000000000000

PAGE

+ + INTEGER C	•	ISEATTR, ISOSEP, IPLOT IPHASE3 IPHASE3 ESTOP	ISOSEP , IPLOT IPHASE2, IPHASI	OT . IDRIFLG ASE3		•
C MASSES COMMON BLOCK	•		•	* 6	******	•
COMMON /MASSES + REAL +	SES /	•	MASSOA2 MASSSO MASSR(6) MASSOC MASSOA2 MASSOC MASSOR		MASSO MASSO	
C MATRIX COMMON BLOCK	LOCK					•
COMMON /MATRIX	RIX /	DCMAE(3,3) . DCMSE(3,3) . DCMSAE(3,3) . DCMDUM(3,3)	. DCMRA(3,3) . DCMTS(3,3) . DCMOAE(3,3)	3) . DCMSA(3,3 3) . DCMTE(3,3 ,3), DCMSR(3,3	(3,3) . (3,3) . (3,3) .	
C MISCELLANGULS DATA COMMON BLOCK	ATA COM	MON BLOCK				* :
COMMON /MISC	\ 0	IPAGECT(31)	, LINECT(31)	1(31)	IPRTCNT(31)	-
• •		MAXLINE	MAXREPT		MAXEVNT	
• •		IDATE	. HEADALT	· ·	HEADVEL	
+		HEADSR	HEADYAW	A.	HEADP11	
• •		HEADROL REPTYPE(5 31)	HEADWGI	GI (2)	BIAS PRIWGHT(2)	
•				IEVENTS(38)	TIMES(38)	
+			IMVDC	•	PRTEMP(2)	
<b>* *</b>		PRIMASS(2) ZVECT(3)	XYZ(3)	× ·	PKZVEL SAVTIME	
+		XACCEL(3)	YACCEL(3)	L(3)	ZACCEL(3)	•
INTEGER		REPTYPE PRTWGHT	. BIAS	•	PRTLNGT	•
+		PRTEMP	PRTMASS.	55	:	;
C MOMARMS COMMON BLOCK	BLOCK	는 발표를 통해 되면 보게 되면 된 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등 등	*			
COMMON /MOMARMS / +REFLNSA ,URX(6) ,URY(6) ,URZ(6)	IDMARMS / .REFLNOA	REFLNSA	, URX(6)	.URY(6)		
~	SS0CA (2	), ZSSOCA(2)	, XSSORK(6)	YSSORK(6)	. ZSSORK(6).	
+XSSORRE .Y	YSSOKKE VSSOKKE	2 SSUKKE	XSSOLRE XSSOROT	VSSOLKE	ZSSOURE .	
ယ	SS0SB(6	), ZSSOSB(6)			ZRRCSAC .	
+XSSCSAC ,Y	, YSSCSAC	, ZSSCSAC		, YSSOSRP	ZSSOSRP .	
+XSSASRP ,Y	, YSSASRP	ZSSASRP	, XRRDAP(2), YRRDAP(2)	YRRDAP(2)	ZRRDAP(2).	
+XKKSBO(6),YKKSBO(6),ZKKSBO(6),XSSOCP(2),YSSOCP(2),ZSSOCP(2)	RRSBO(6	), ZRRSBO(6)	XSSUCP(2)	YESOCP(2)	, 2550CP(2), 2650AC	
+XSRCSAC Y	YSRCSAC	ZSRCSAC			. ZSSOAC .	
	, YRSOSB		_	_	ZRRSBOT .	
	. YRRSB		, xSSOCH(3)	3	, ZSSOCH(3),	
+XAACSO ,Y	, YAACSO	ZAACSO	.XASOAC	, YASOAC	. ZASDAC .	

```
PAGE
83/11/07. 09.41.53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C COMPUTE VELOCITY OF DROGUE SLUG/CONTAINER, RELATIVE TO THE AIR CONTROLL C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C.COMPUTE TOTAL VELOCITY OF DROGUE SLUG/CONTAINER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RECOVDT (2, 25)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRAJCH(97.3)
QUATSO(65)
QUATAC(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TRAJS0( 193)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTE VELOCITY OF DROGUE SLUG/CONTAINER, RELATIVE TO THE AIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTE VELOCITIES AND ACCELERATIONS OF DROGUE SLUG/CONTAINER
                                                                                                                                                               IFTRECV
SEPFRCE
                                                                                                                                                                                                                                                                                                                                                                                         DROVELX
XDROGAP
                                                                                                                                                                                                                                                                                                                                 100PLOY
ORORAG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TDROGLS
                                                                                                                                                                                                                                                   1FTDR02
                                                                                                                                                                                                                                                                                                       I DROGL S
                                                                                                                                                                                                                       DROGPD2
                                                                                                                                                                                                                                                                             I F T DRO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAL T 1
TDELAY
                                                                                                                                     ZRECAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IRKPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IYPRX
                                                                                                                                                                                                                                                                        DROGFT2(2,25)
OROGFT((2,25)
DROGLS(2,25)
DROGLL
DROGLL
DROVLZ
ZDROGAP
GLIMIT
WGHTDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - SORT(DVELX+DVELX+DVELY+DVELZ+DVELZ)
                                                                                                                                                                    RECOVI.S(2, 25)
                                                                                                                                                                                           RECOVFT(2,25)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . TRAJOA(193)
, TVCEOS(225)
. QUATDA(65)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACC . . S . RHOS . CDDC . AREADC . DVEL/MASSDC
                                                                               TRDPLOY
RECOVPD
                                                                                                                                                                                                                          DRORAG2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NPTSRUT
                                                                                                                                                                                                                                                      VELCON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPCPASS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMON /RKUTTA / TIME . TIMES . DELTAT
TRAJSA(193) . TRAJOA(
TRAJAC(193) , TVCEOS(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IKSUMX
IVIIX
IVPRIX
IPVIX
ICVIIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0) G010 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QUATSA(65)
INTSTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INTEGRATION ROUTINE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DVELX = TRAJCH(5,1) - WINDX
DVELY = TRAJCH(6,1) - WINDY
DVELZ = TRAJCH(7,1) - WINDZ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRAJCH(11,1) * -ACC * DVELX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . EQ 0) GD10.
                                                                                                                                                               NPTSRLS
NPTSRT
LDRGGUE
PORDSDS
NPTDFT1
NPTDFT1
NPTDFT1
NPTDFT1
DRGGPD1
ORGGPD1
ORGGPC
CHALT2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1V13X
1VPR12X
1CV1X
                                                                                                           RECORAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPOINTS
  0PT = 1
                                                                                  COMMON /PARCHUT /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF (IEVENTS (18)
  74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DVEL
     SUBROUTINE SLUGGON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                       55
                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           170
                                                                                                                                                                                                                                                                                                                                                                       125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   165
```

PAGE

```
C COMPUTE DROGUE CONTAINER/SLUG POSITION WHEN LINE STRETCH IS

C DETERMINED FROM A TABLE
Consequence of the container of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C SET VELOCITIES OF DROGUE SLUG/CONTAINER EQUAL, TO THOSE OF THE SEAT/
C OCCUPANT WHEN LINE STRETCH IS DETERMINED FROM A TABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WRITE(5,410)
410 FORMAT(2x,//72(1H+)/,4x,"FATAL ERROR(SUBROUTINE SLUGCON)***
+*R FOUAL TO ZERO RESULTS IN DIVISION BY ZERO",/,72(1H+))
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R * SQRT(TRAUSO(14) * TRAUSO(14) + TRAUSO(15) * TRAUSO(15) TRAUSO(15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XDIS = -SIGN((LINELTH + CDS2 + CDS(BETA)), TRAJSO(14))
YDIS = -SIGN((LINELTH + CDS2 + SIN(BETA)), TRAJSO(15)
ZDIS = -SIGN((LINELTH + SIN2), TRAJSO(16))
TRAJCH(2.1) = XYZ(1) + XDIS + TRAJSO(2)
TRAJCH(3.1) = XYZ(2) + YDIS + TRAJSO(3)
TRAJCH(4.1) = XYZ(2) + ZDIS + TRAJSO(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LINELTH * DROGLL * ((TIME - TIMES(18))/TDROGLS)
TRAJCH(12,1) = -ACC + DVELY
TRAJCH(13,1) = -ACC + TRAJCH(7,1) - GRAVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CALL ROTATE(XYZ(1), XYZ(1), ZVECT(1), DCMSE.1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIN2 = TRAJSO(16)/R
COS2 = COS(ASIN(SIN2))
BETA = ZARCTAN(TRAJSO(15),TRAJSO(14))
                                                                                                                                                          TRAJCH(8,1) = TRAJCH(5,1)
TRAJCH(9,1) = TRAJCH(6,1)
TRAJCH(10,1) = TRAJCH(7,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRAJCH(5,1) = TRAJSD(14)
TRAJCH(6,1) = TRAJSD(15)
TRAJCH(7,1) = TRAJSD(16)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IF(R .EQ. 0.0) GOTO 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              XYZ(1) = XSSOCH(1)
XYZ(2) = YSSOCH(1)
XYZ(3) = ZSSOCH(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30 CONTINUE
                                                                                                                                                                                                                                                                                                                                                                              GOTO 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6010 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                              U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                   175
                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
```

600 CONTINUE RETURN END

SUBROUTINE THRUST

C DESCRIPTION - THIS SUBROU C FUNCTION - THIS SUBROU C METHOD - THE NATIO OR C COMPUTED US C COMPUTED US C COMMUNICATIONS C CALLED BY: INPUT C COMMUNICATION C CALLED BY: INPUT C COMMUNICATION C COMMU	DESCRIPTION - LEVEL 3  FUNCTION - THIS SUBROUTINE COMPUTES A NEW THRUST VS TIME TABLE FOR EACH ROCKET USING A STANDARD TABLE AND THE NEW BURN TIME FOR THE ROCKET.  METHOD - THE RATIO OF THE NEW BURN TIME TO THE OLD (STANDARD) BURN TIME IS COMPUTED. THIS RATIO IS USED TO CHANGE THE THRUST AND TIME AT EACH POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONAL TO THE RATIO. THE RATIO THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THE RATIO OF NEW BURN TIME TO STANDARD BURN TIME ARATIO - AREA UNDER STANDARD TABLE RATIO OF NEW BURN TIME TO STANDARD BURN TIME ARATIO - AREA UNDER STANDARD TABLE ISTART - START TIME OF STANDARD TABLE TSTOP - START TIME OF STANDARD TABLE TSTOP - START TIME OF STANDARD TABLE TSTOP - STAND TABLE TO SAVENESSED NPDINTS - LOCAL VARIBBLE TO SAVE NUMBER OF POINTS NPDINTS - LOCAL VARIBBLE TO SAVE NUMBER OF POINTS NPDINTS - LOCAL VARIBBLE TO SAVE NUMBER OF POINTS NPDINTS - LOCAL VARIBBLE TO SAVE NUMBER OF POINT TABLE NPASS - NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NPASS - NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NOTED THAT TABLE TO THE NUMBER OF POINT TABLE NOTED THAT TABLE TO THE NUMBER OF POINT TABLE NOTED THAT TABLE TO THE NUMBER OF POINT TABLE NOTED THAT TABLE TO THE NUMBER OF POINTS NOTED THAT TABLE TO THAT TABLE TO THE NUMBER OF POINTS NOTED THAT TABLE TO THE NUMBER TO THE TABLE TO THE NUMBER OF THE TABLE TO THE NUMBER OF THE T
C FUNCTION - I C METHOD - I C C METHOD - I C C C C C C C C C C C C C C C C C C C	THIS SUBROUTINE COMPUTES A NEW THRUST VS TIME TABLE FOR EACH ROCKET USING A STANDARD TABLE AND THE NEW BURN TIME FOR THE ROCKET OLD (STANDARD) BURN TIME FOR THE ROCKET IS USED TO CHANGE THE THRUST AND TIME AT EACH POLNT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO. THE AREA UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO OS NOT APPROACH 1.000 AFTER FIVE TRIES THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THE STATO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME STANDARD THRUST CURVE STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C METHOD - T T C C C C C C C C C C C C C C C C C	TABLE FOR EACH ROCKET USING A STANDARD TABLE AND THE NEW BURN TIME FOR THE ROCKET.  - THE NEW BURN TIME FOR THE ROCKET.  - THE RATIO OF THE NEW BURN TIME TO THE OLD (STANDARD) BURN TIME IS COMPUTED. THIS RATIO IS USED TO CHANGE THE THRUST AND TIME AT EACH POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO OF THE NEW AND OLD CURVES(TOTAL THE RREA UNDER THE NEW AND OLD CURVES(TOTAL THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  NS -  RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF REAS UNDER CURVES(NEW/OLD)  RATIO OF REAS UNDER CURVES(NEW/OLD)  RATIO OF REW THRUST CURVE STANDARD THRUST CURVE STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C METHOD - T C C C C C C C C C C C C C C C C C C	THE NEW BURN TIME FOR THE ROCKET.  - THE RATIO OF THE NEW BURN TIME TO THE OLICSTANDARD BURN TIME IS COMPUTED. THIS RATIO IS USED TO CHANGE THE THEUST AND TIME AT EACH POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONAL TO THE RATIO OF THE RATIO OF THE NEW THRUST IS COMPUTED USING THE TRAPEZIODAL THRUST) IS COMPUTED USING THE TRAPEZIODAL THE RATIO OF THE BURN RATIO OS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO OSES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E  RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF REAS UNDER CURVES(NEW/OLD) RATIO OF NEW BURN THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C COMMUNICATIONS C COLLS: C CALLS: C CA	THE RATIO OF THE NEW BURN TIME TO THE  OLD(STANDARD) BURN TIME IS COMPUTED. THIS RATIO IS USED TO CHANGE THE THRUST AND TIME AT EACH POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTD THE RATIO. THE RATIO UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN 0.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E  RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME STANDARD THRUST CURVE STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOR TABLE BRING PROCESSED LUCAL VARIBBLE TO SAVE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE STOR THE STOR
C C C C C C C C C C C C C C C C C C C	OLD(STANDARD) BURN TIME IS COMPUTED. THIS RATIO IS USED TO CHANGE THE THRUST AND TIME AT EACH POINT IN THE TABLE. THE NEW THE IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO. THE AREA UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE TRAPEZIOAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  NS - TANDARD THRUST CURVE RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME STANDARD THRUST CURVE STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE NUMBER OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C C C C C C C C C C C C C C C C C C C	IS USED TO CHANGE THE THRUST AND TIME AT EACH POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO. THE AREA UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  NS - RATIO OF REAS UNDER CURVES(NEW/OLD) RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF REAS UNDER CURVES(NEW/OLD) ROCK TABLE BEING PROCESSED LOCAL VARIBBLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C C C C C C C C C C C C C C C C C C C	POINT IN THE TABLE. THE NEW TIME IS DIRECTLY PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO. THE AREA UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE RRAFEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF REAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD TABLE STOP TIME OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C C C C C C C C C C C C C C C C C C C	PROPORTIONAL TO THE RATIO AND THE NEW THRUST IS INVERSLY PROPORTIONALTO THE RATIO. THE AREA UNDER THE NEW AND OLD CURVES(TOTAL THRUST) IS COMPUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS MOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME STANDARD THRUST CURVE STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STORT THE OF STANDARD TABLE STORT THE OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C C C C C C C C C C C C C C C C C C C	15 INVERSITY PROPORTIONALTO THE RATIO.  15 INVERSITY PROPORTIONALTO THE RATIO.  COMPUTED USING THE TRAFEZIODAL RULE. IF THE RATIO OF  THE VALUES IS NOT BETWEEN 0.98 AND 1.02, THE BURN  RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF  THE RATIO OGES NOT APPROACH 1.000 AFTER FIVE TRIES  THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E ARIABLES DEFINED:  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  STATIO OF NEW BURN TABLE  STANDARD THRUST CURVE  STAND THE OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TOWNENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  ROR CONDITIONS:
C C C C C C C C C C C C C C C C C C C	AS JUNEAS TE PROPORTIONALLY THE RATIO. THE AREA UNDER THE WEW AND OLD CURVES(IDTAL 1971) IS COMPUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO OS NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E  ARIAGLES DEFINED:  E  ARIAGLES DEFINED:  C  AREA UNDER STANDARD TABLE  START TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  ROCKETAL ARLESTED TO THE OLD ABLE FOR CURRENT TABLE
C C C C C C C C C C C C C C C C C C C	UMDER THE NEW AND OLD CURVES(10) LL THRUSI) IS UNDUTED USING THE TRAPEZIODAL RULE. IF THE RATIO OF THE VALUES IS MOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN THRUST CURVE RATIO OF AREAS UNDER CURVES(NEW/OLD) RAREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLS: C ARTATIO - RATIC C AREADLD - RATIC C AREADLD - RATIC C TSTART - START C TSTART C C NPASS - NUM C C DOTENTIAL ERRORT C PROBLEM WITHIN C C NUMITHIN C C NUMITHIN C C NORTH C NUMITHIN C C NORTH C NUMITHIN C C NORTH C NUMITHIN C NUM	COMPUTED USING THE TRAFEZIODAL RULE. IF THE RATIO OF THE VALUES IS NOT BETWEEN 0.98 AND 1.02, THE BURN THAT O IS MODIFIED AND THE PROCESS IS REPEATED. IF THAT IO ODES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E ARIABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME STATIO OF NEW BURN THRUST CURVE START TIME OF STANDARD THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLED BY: C ARTATIO - RATE C AREALD - ARE C AREANEW - ARE C AREANEW - ARE C TSTOP - STA C TSTOP - STA C TSTOP - STA C TSTOP - ARE C TSTOP - ARE C AREANEW - ARE C AREANEW - ARE C TSTOP - ANUM C TSTOP - TTA C TSTOP - ANUM C TSTOP - TTA C TSTOP - ANUM C TSTOP - TTA C TSTOP - TTA C TSTOP - ANUM C NPOINTS - LOC C DOTENTIAL ERROREM C PROBLEM WITHIN	THE VALUES IS NOT BETWEEN O.98 AND 1.02, THE BURN RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E ARIABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF REAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE NOCKET TABLE BEING PROCESSED IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLED BY: C CALLS:	THE RATIO IS MODIFIED AND THE PROCESS IS REPEATED. IF THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  THIS IS REPEATED FOR EACH ROCKET.  BY: INPUT  E ARABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF NEW THRUST CURVE STATIONER STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE NOCKET TABLE BRING PROCESSED LOCAL VARIBBLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLS: C ARTAIO - RATC C AREADLD - RATC C AREADLD - RATC C TSTART - START C TSTART C TSTA	THE RATIO DOES NOT APPROACH 1.000 AFTER FIVE TRIES THIS IS REPEATED FOR EACH ROCKET.  NS - BY: INPUT  E ARIABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF AREAS UNDER CURVES(NEW/OLD) RATIO OF AREAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLED BY: C BTRATIO - RAT C AREALD - RAT C AREANEW - ARE C TSTOP - STO C TSTOP - STOP C TSTOP - STOP C TSTOP - STOP C TSTOP	THIS IS REPEATED FOR EACH ROCKET.  NS -  BY: INPUT  E  ARIABLES DEFINED:  RATIO OF AREAS UNDER CURVES(NEW/OLD)  AREA UNDER STANDARD THRUST CURVE  START TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  NOCKET TABLE BEING PROCESSED  LOCAL VARIABLE TO SAVE NUMBER OF POINTS  IN CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CDMMUNICATIONS C CALLS: C ARATIO - RAT C AREADLD - ARE C AREADLD - ARE C AREADLD - ARE C TSTOP - STO C TSTOP - STOP C TSTOP C TSTO	THIS AS REPEATED TOK EACH MOCKET.  BY: INPUT  ARABLES DEFINED:  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF NEW THRUST CURVE  STANDARD THRUST CURVE  STANDARD TARUE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOR TABLE BRING PROCESSED  LOCAL VARIBBLE TO SAVE NUMBER OF POINTS  IN CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C COMMUNICATIONS C CALLES C RATTIO - RAT C AREADLD - RAT C AREADLD - RAT C AREADLD - RAT C TSTART - STA C NPOINTS - LOC C NPOINTS - LOC C NPOINTS - LOC C NPOINTS - NUM C NPOINTS - NUM C START - START	NS -  BY: INPUT  E  ARIABLES DEFINED:  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF AREAS UNDER CURVES(NEW/OLD)  AREA UNDER STANDARD THRUST CURVE  START TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  NOCKET TABLE BEING PROCESSED  LOCAL VARIABLE TO SAVE NUMBER OF POINTS  IN CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CALLED BY: C CALLED BY: C NON- C BTRATIO - RAT C ARATIO - RAT C AREADLD - RAT C TSTOP - STO C NPOSS - NUM C NPOSS - NUM C PROBLEM WITHIN	BY: INPUT  EARIABLES DEFINED:  RATIO OF AREAS UNDER CURVES(NEW/OLD)  RATA UNDER STANDARD THRUST CURVE  START TIME OF STANDARD THRUST CURVE  START TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  NOCKET TABLE BEING PROCESSED  IN CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C CALLS:  DONE  C NON-COMMON VARI  C ARATIO - RAT  C AREADLD - ARE  C AREADLD - ARE  C AREADLD - ARE  C TSTOP - STO  C NPASS - NUM  C NPOINTAL ERROM  C POTENTIAL ERROM  C GO TO WITHIN  C PROBLEM WITH  C PR	RATIABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF AREAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE ARRA UNDER NEW THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C NON-COMMON VARI C BTRATIO - RAT C AREADLD - ARE C AREADLD - ARE C TSTART - STA C NPOINTS - LOC C NPASS - NUM C NPOINTAL ERROR	ARTABLES DEFINED: ARTABLES DEFINED: RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF AREAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE AREA UNDER NEW THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C NDN-COMMON VARI C ARATIO - RAT C AREADLD - ARE C AREANEW - ARE C TSTARY - STA C TSTARY - STA C TSTARY - STA C NDINTS - LOC C NPOINTS - LOC C NPASS - NUM C NPASS - NUM C OTENTIAL ERROR C GO TO WITHIN C PORELEM WITHIN C OFFICE OFFICE OFFICE C	ARIABLES DEFINED:  RATIO OF NEW BURN TIME TO STANDARD BURN TIME  RATIO OF AREAS UNDER CURVES(NEW/OLD)  AREA UNDER STANDARD THRUST CURVE  START TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  STOP TIME OF STANDARD TABLE  ROCKET TABLE BEING PROCESSED  IN CURRENT TABLE  NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C AREALD - RATE ARATIO - RATE C AREALD - ARE C AREALD - ARE C 1510P - 510 C 174BX - 800 C NPOINTS - LDC C NPOINTS - NUMBER AND THE RATIO C NPOINTS - NORTHIN NITHIN NITH	RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF AREAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE STORT TIME OF STANDARD TABLE TO STANDARD TABLE STORT TABLE BEING PROCESSED TO CHARL TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C BRAATIO - RAT C AREADLO - ARE C AREADLO - ARE C TSTART - STA C NPOINTS - LOC C NPASS - NUM C NPASS - NUM C NPASS - NUM C POTENTIAL ERRIPR C PROBLEM WITHIN	RATIO OF NEW BURN TIME TO STANDARD BURN TIME RATIO OF AREAS UNDER CURVES (NEW/OLD) AREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD THRUST CURVE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE BEING PROCESSED IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C ARATIO - RAT C AREADLD - ARE C AREADLD - ARE C TSTANF - STA C TSTOP - STO C TABX - ROC C NPOINTS - LDC C NPOINTS - LDC C NPOINTS - LDC C NPOINTS - LDC C NPOINTS - CON C POTENTIAL ERROR C C C T THE RATIO C POOBLE M WITHIN	RATIO OF AREAS UNDER CURVES(NEW/OLD) AREA UNDER STANDARD THRUST CURVE AREA UNDER STANDARD THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE ROCKET TABLE BRING PROCESSED IN CURRENT TABLE IN SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C AREADLD - ARE C TSTART - STA C NOTONIS - LOC C NOTONIS - LOC C NOTONIS - LOC C NOTONIS - LOC C NOTONIS - NUM C POTENTIAL ERROR C PROBLEM WITHIN	AREA UNDER STANDARD THRUST CURVE AREA UNDER NEW THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE ROCKET TABLE BEING PROCESSED LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C AREANEW - ARE C ISTART - STA C ITABX - ROC C NPOINTS - LDC C NPOINTS - LDC C NPASS - NUM C POTENTIAL ERROR C GO TO WITHIN C POBLEM WITH	AREA UNDER NEW THRUST CURVE START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE ROCKET TABLE BEING PROCESSED IN CURRENT TABLE IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE
C 17AR - STA C 17AR - STA C 17ABX - ROC C NPOINTS - LDC C NPOSS - NUM C POTENTIAL ERROR C OT TO WITHIN C POBLEM WITH	START TIME OF STANDARD TABLE START TIME OF STANDARD TABLE STORY TIME OF STANDARD TABLE ROCKET TABLE BEING PROCESSED LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE ROR CONDITIONS:
C 151AR1 - 51A C 151DP - 51O C 17ABX - 80C G NPOINTS - LDC C NPOINTS - LDC C NPOINTS - LDC C NPOINTS - NUM C FORENTIAL ERRID C GD TO WITHIN C PROBLEM WITH	START TIME OF STANDARD TABLE STOP TIME OF STANDARD TABLE ACCKET TABLE BEING PROCESSED LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE FOR CONDITIONS:
C TSTDP - STO C ITABX - ROC C NPOINTS - LDC C NPASS - NUM C POTENTIAL ERROR C GO TO WITHIN C POOBLEM WITH C ************************************	STOP TIME OF STANDARD TABLE ROCKET TABLE BEING PROCESSED LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE ROR CONDITIONS:
C ITABX - ROC C NPOINTS - LDC C NPASS - NUM C POTENTIAL ERROR C OT THE RATIO C GD TO WITHIN C PROBLEM WITH C PROBLEM WITH C PROBLEM WITH C PROBLEM WITH	ROCKET TABLE BEING PROCESSED LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE ROR CONDITIONS:
G NPOINTS - LDC C NPASS - NUM C POTENTIAL ERPOR C OF THE RATIO C GD IT THE NITHIN C PROBLEM WITHIN C PROBLEM WITHIN C PROBLEM WITHIN	LOCAL VARIABLE TO SAVE NUMBER OF POINTS IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE ROR CONDITIONS:
C NPASS - NUM C POTENTIAL ERROR C OF THE RATIO C GO TO WITHIN C PROBLEM WITH	IN CURRENT TABLE NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE ROR CONDITIONS:
C NPASS - NUM C POTENTIAL ERROR C OT THE RATIO C GO TO WITHIN C PROBLEM WITH	NUMBER OF PASSES THRU LOOP FOR CURRENT TABLE  **ROR CONDITIONS:
C POTENTIAL ERORG C IF THE RATIO C GD TO WITHIN C PROBLEM WITH C ************************************	NUMBER OF PASSES THRO LOUP FOR CORRENT TABLE **ROR COUNTILIONS:
C OFFILE RATE C G IF THE RATIO C GD TO WITHIN C PROBLEM WITH C C C C C C C C C C C C C C C C C C C	KOR CONDITIONS:
C 1F THE RATIO C GO TO WITHIN C PROBLEM WITH C ************************************	10 OF THE REM AREA TO THE OID AREA DOED AND
C GD TO WITHIN C PROBLEM WITH C C	TO OF THE NEW ARCA TO THE OLD ARCA DOES NOT
C PROBLEM WITH	GD TO WITHIN 1% OF 1.000 AFTER FIVE TRIES. THEN THERE IS A
	THE TABLE
•••••	
C RECALCULATED RD	C RECALCULATED RDCKET THRUST TABLE COMMON BLOCK
C	**************************************
ARIA NOMMON	COMMON /IRKIDII / RKIDUI(2:25:6)
ACC 10 HOWARD OF THE LEVEL OF	700 8 100110
C SECTION TO COMM	٠
**************************************	******
COMMON / 1RO	
•	6) . RKWGHT(6).
•	VPDSRK(B) ZPDSRK(B)
	DVDETA(E)
	· COLUMNICA
	Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z
	***************************************
C LOOP THRU PROCE	LOOP THRU PROCESSING FOR EACH ROCKET IN SYSTEM
	· 教育学师教育中心的现在分词 计分别 经存储的 医克洛特氏 医克格特氏 医克格特氏 医克格特氏 医克格特氏 医克格特氏 医克格特氏 医克格特氏 医克格特氏病 医克格特氏病 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器 计记录器
DO 100 11AB	DO 100 ITABX = 1. INRKT
D . VINIUN	NPOINTS - DEMOCALITABE.)
NEASS &	No.

SUBROUTINE THRUST	E THRUST 74/74 OPT=1 B3/11/07. 09.4
	C COMPUTE NEW/OLD BURN TIME RATIO
09	TSTART = RKTHRST(1, NPOINTS, ITABX) TSTOP = RKTHRST(1, NPOINTS, ITABX) BTRATIO = RKBURN(ITABX)/(TSTOP-TSTART) C ************************************
65	C INTEGRATE TO COMPUTE AREA UNDER OLD CURVE
07	AREADLD = 0.0  N1 = NPOINTS-1  DQ 10 IX = 1,M1  to AREADLD-AREADLD-(RKTHRST(2,IX,ITABX)+RKTHRST(2,IX+1,ITABX))  + •(RKTHRST(1,IX+1,ITABX)-RKTHRST(1,IX,ITABX))/2.0  C compute New Points and integrate to compute area Under New CURVE
75	20 AREANEW = 0.0 RKTOUT(1,1,TABX) = RKTHRST(1,1,ITABX) RKTOUT(2,1,ITABX) = RKTHRST(2,1,ITABX)/BIRATIO DO 30 IX = 2.MOINIS
08	<pre>IF (NPASS.EQ.1)RKTOUT(1,IX.ITABX) = RKTOUT(1,IX-1,ITABX)+</pre>
85	C COMPUTE RATIO OF NEW AREA TO OLD AREA AND CHECK FOR DESIRED C ACCURACY. IF NECESSARY, MODIFY BURN TIME RATIO AND RECOMPUTE TABLE C ************************************
06	IF (ARATIO .GT. 0.98 .AND. ARATIO .LT. 1.02) GO TO 100 BTRATIO = BTRATIO+ARATIO NPASS = NPASS+1 IF (NPASS.LT.6) GO TO 20 CONTINUE 100 CONTINUE
56	RETURN

SUBROUTINE TMUPDAT

```
C DESCRIPTION - LEVEL 2

C FUNCTION - LEVEL 2

C FUNCTION - NORMALIZES QUATERNIONS

C FUNCTION - NORMALIZES QUATERNIONS

C FUNCTION - NORMALIZES QUATERNIONS

C THE TRANSFORMATION, QUATERNIONS USED TO UPDATE

C DECAMINATION - NORMALIZED TO SCS) AND - C CALLED BY:

C CALLED BY:

C CALLED BY:

C CALLES:

MATUPD, MATRIX

C OUNTS(1) - NORMALIZED QUATERNIONS

C QUATS(1) - NORMALIZED QUATERNIONS

C QUATS(2) - NORMALIZING FACTOR

C QUATS(3) - C QUATS(4) - C QUATS(4) - C QUATS(5) - C QUATS(6) - C QUATS(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C MATRIX COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               , 1PRICNI(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIWGHT (2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRTEMP(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SAVTIME
ZACCEL(3)
PRTLNGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIMES (38)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HEADVEL
HEADPIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HAXEVNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDMMDN /WATRIX / DCMAE(3,3) , DCMRA(3,3) , DCMSA(3,3) , DCMSE(3,3) , DCMTS(3,3) , DCMTE(3,3) , DCMSAE(3,3) , DCMSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PKZVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BIAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IEVENTS (38)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . LINECT(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRTLNGT(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YACCEL(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IERRFLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HEADALT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEADYAW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HEADWGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIINDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       XYZ(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REPTYPE(5,31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              / IPAGECT(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DCMDUM(3,3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THEADER (24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZVECT(3)
XACCEL(3)
REPTYPE
PRIWGHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIMASS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MAXL INE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I E VL I NE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HE ADROL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HEADSR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C SECTION 1 COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMON /MISC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INTEGER
                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              55
```

```
295
     PAGE
     53
     83/11/07 09.41
                                                                                                                                                                                                                                                                                                                                                                     CDMMON /RKUTTA / TIME , TIMES , DELTAT TRAJSO(193) , TRAJSO (193) 
                                                                                                                                                                                        + PRIMASS , PRINDX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF (QUATSO(1) EQ. 0.) GD TO 200
ONORMS = SQRT(QUATSO(2)+QUATSO(2)+QUATSO(3)+QUATSO(4)

+ QUATSO(4)+QUATSO(2)+QUATSO(5)+QUATSO(3)+QUATSO(4)

- QUATSO(4)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(5)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUATSO(6)+QUAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         qNORMS = SORICOLAC(2) + QUATAC(3) + QUATAC(4) + QUATAC(4) + OUATAC(4) + OUATAC(4) + QUATAC(5) / QNORMS QUATS(2) * QUATAC(3) / QNORMS QUATS(2) * QUATAC(4) / QNORMS QUATS(4) * QUATAC(5) / QNORMS QUATS(4) * QUATAC(5) / QNORMS QUATS(4) * QUATAC(5) / QNORMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UNDERMS = SORT(QUATSA(2) + QUATSA(3) + QUATSA(4)

+ QUATSA(4) + QUATSA(5) + QUATSA(5))

+ FF (ONDRMS : EQ. O ) GD TD 53

+ QUATS(1) + QUATSA(2) / QUORMS

QUATS(1) - QUATSA(3) / QUORMS

QUATS(2) - QUATSA(4) / QUORMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ONDRMS = SORI(QUATOA(2)+QUATOA(2)+QUATOA(3)+QUATOA(3)+QUATOA(4)
+QUATOA(4)+QUATOA(5)+QUATOA(5))
FTN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKPASSX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPYI 1X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1Y12X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IYPRX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IKSUMX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IYPRIX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONTINUE
1F (QUATOA(1) EQ 0.) GD TO 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 ) 60 10 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IF (QNDRMS EQ. 0.) GD TO $2
QUAIS(1) = QUATDA(2) / QNDRMS
QUAIS(2) = QUATDA(3) / QNDRMS
QUAIS(3) = QUATDA(3) / QNDRMS
QUAIS(4) = QUATDA(4) / QNDRMS
CALL MATUPD(QUAIS, DCMOAE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QUATS(4) = QUATSA(5) / QNORMS
                                                                                                                                                                                                                                                                                                                 INTEGRATION ROUTINE COMMON BLOCK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IVIX
IYI3X
IVPRI2X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPDINIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DIMENSION QUATS(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF (OUATSA(1) EQ
     SUBROUTINE IMUPDAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   υU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ပ
                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
```

071.0	V DCMSE TO GET DCMSA	5 0 4 0 5 5 0 0 0 5 0 5 0 5 0 5 0 5 0 5		(SUBROUTINE TMUPDAT)***,/,	
Cataboo of the Contract of the	500 CONTINUE C. THE TRANSPOSE OF DCMAE IS USED TO MULTIPLY DCMSE TO GET DCMSA.	CALL MATRIX(DCMSE, DCMAE, DCMSA, 2) CALL MATRIX(DCMSA, DCMRA, DCMSR, 2) GD TO 9000 50 IQNORMS=10HONORMS-S0	GO TO 55 51 LONDRMS=10HONDRMS-AC GO TO 55 GO TO 55 GO TO 55	53 IONDRMS=10HONDRMS-SA 55 WRITE (5,100) IQNDRMS IERRFLG # 1 100 FORMAT (1X,//,72(1H*)/4X,"FATAL ERROR (SUBROUTINE IMUPDAT)***,/, + 4X,410,"CALCULATED TO BE EQUAL TO ZERO-RESULTS IN DIVISION BY #, + 75FRT / 72(1H*)	INUE
	500 CONTINUE C. THE TRANSPOSI	CALL CALL GD GD 50 10ND	50 T 51 10NO 52 10NO 52 10NO	53 10N0 55 WRIT 16RR 100 FORM + + + 7	9000 CONTINUE RETURN END
,	2	120	125	130	135

C DESCRIPTION - LEVEL 3  C FUNCTION - TO CALCULATE THE FORCES AND MOMENTS IMPOSED ON THE SEAT/OCCUPANT DUE TO THE DEFLECTIONS OF THE CATAPULT TUBES  C COMMUNICATIONS: C CALLED BY: SEATOCC C CALLED BY: SEATOCC C CALLED BY: SEATOCC C CALLED BY: FATOCC C SECTION	LEVEL 3 TO CALCULATE THE FORCES AND MOMENTS IMPOSED SEAT/OCCUPANT DUE TO THE DEFLECTIONS OF THE TUBES SEATOCC ROTATE		
C CUMMUNICATION - TO CALCULATE THE C COMMUNICATIONS: C CALLED BY: SEATOCC C C C C C C C C C C C C C C C C C C	FORCES AND MOMENTS IN		•
C CDMMUNICATIONS: C CALLED BY: SEATOCC C CALLED BY: SEATOCC C CALLES: ROTATE C. CALLED BY: ROTATE C. C	TO THE DEFLECTIONS O		•
C CDMMUNICATIONS: C CALLED BY: SEATOCC CALLED BY: S	W 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	JE THE CATAPULT	• •
C CALLED BY: SEATOCC CALLS: ROTATE CONTRICTOR CONTRICTOR C SEAT/OCCUPANT FORCES COMMON BLC COMMON /FORCESO (FXCLSO(6) + FXCLSO(6) + FXCLSO			. •
C SECTION 9 COMMON BLOCK  C SECTION 9 COMMON FORCES COMMON BLOC  C SECTION 9 COMMON BLOCK			•
C SEAT/OCCUPANT FORCES COMMON BLC C		***********	• •
C SEAT/OCCUPANT FORCES COMMON BLC  COMMON /FORCESO / FXCASO(2)  + FXCASO(2)  + FXRKSO(6)  + FXRKSO(6)  + FXRKSO(6)  - FXRK	*****************	*************	***
COMMON /FORCESO / FXCASO(2) + FXUBSO + FXEKSO(6) + FXESO -	CK		• :
FXTUBSO  FXSLSO(6)  FXSLSO(6)  FXRKSO(6)  FXRKSO(6)  FXRKSO(6)  FXRESO  CSECTION 9 COMMON BLOCK  C**********************************	FYCASO(2) . FZCASO(2) .	)(2)	
FXSESG(6)  FXRKSG(6)  FXCHSG(6)  FXCHSG(6)  FXAESG  FXAESG  C	FYTHRSA	, c	
FXRKSG(6)  FXCHSQ(3)  FXAESO  FXDETSO  CSECTION 9 COMMON BLOCK  C**********************************	FYSLS0(6)	. (9)	
FXCHSQ(3) FXAESO FXAESO FXDETSO C.SECTION 9 COMMON BLOCK C.SECTION 1 CATPLT / INCAT	. FYRKS0(6)	, (9)	
C SECTION 9 COMMON BLOCK  C SECTION 1 CAMPON BLOCK  C SECTION 1 CAMPON BLOCK	. FYCHSD(3)	. (8)	
C 9 COMMON BLOCK C.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E.E	•		
C SECTION 9 COMMON BLOCK C***********************************	FYDRISO	FZDRTSD	
CARREST TARGET AND TOTAL AND THE TARGET AND THE TAR			
COMMON /ICATPLT / INCAT	****	************	***
The same of the sa	. CATLNT(2).	CATSTK(2), TCI (;	(2).
+ XPOSAP(2)	YPOSAP(2),	P(2)	2),
+ CATHRST(2,25,2),	I TUBEND ,		
+ PTUBE	, MUTUBE , EX	EXILNGI , ICAIOUI	_
**********	*****	***********	•
C MATRIX COMMON BLOCK			•
:		******	•
COMMON /MATRIX / DCMAE(3.3)	. DCMRA(3,3)	DCMSA(3.3)	
+ DUMSE(3,3)	DCMIS(3,3)	DCMIE(3.3)	
+ DCMDAE(4,4),	UCMUAE(3,3),	. (6.6)	
	***************************************	************	•
C MISCELLANEOUS DATA COMMON BLOCK			•
++++++++++++++++++++++++++++++++++++++	. * * * * * * * * * * * * * * * * * * *	TDDTCMT(34)	•
•	•	MAXEVAIT	•
INI INI	TERREIG		•
+ IDATE	HEADALT	HEADVEL	
+ HEADSR	. HEADYAW	HEADPIT	
+ HEADROL	•	BIAS	
+ REPTYPE(5,31)	•	PRIWGHT	•
+ IHEADER(24)	•	. TIMES (38)	•
()33*m±00	NOW YOU		•
+ PKIMA55(2)	•	SAVIME	•
* XACCEL(3)		ZACCEL (3)	•
INTEGER		PRTLNGT	-
+ PRIWGHT			
+ PRIEMP		PRTINDX	
C MOMARMS COMMON BLOCK			

	+ REFLNSO	REFLINDA	REFLNSA	BEFLINSO REFLINDA REFLINSA JURX(6) JURY(6) JURZ(6)	.URY(6)	, URZ(6)	
	+XSSDCA(2)	YSSDCA(2)	, ZSSOCA(2)	XSSORK(6)	YSSORK(6)	XSSOCA(2), YSSOCA(2), ZSSOCA(2), XSSORK(6), VSSORK(6), ZSSORK(6),	
9	+XSSORRE	YSSORRE	ZSSORRE	.XSSOLRE	YSSOLRE	, ZSSOLRE .	
	+XSSOMRE	XSSOMRE YSSOMRE ZSSOMRE	ZSSOMRE	XSS080T	, YSS080T	. 2SSOBOT .	
	+xSSSS8(6)	XSS058(6), YSS058(6), ZSS058(6), XRRCSAC	(9)880887	XRRCSAC.	YRRCSAC	ZRRCSAC .	
	+XSSCSAC	*XSSCSAC YSSCSAC ZSSCSAC	ZSSCSAC	XSSOSRP.	YSSOSRP	ZSSOSRP .	
	+					ZARMPE .	
£ 5	+XSSASRP	YSSASRP	ZSSAS VP	XRRDAP(2)	YRRDAP(2)	*XSSASRP YSSASRP ZSSAS 'P XRRDAP(2), YRRDAP(2), ZRRDAP(2),	
	+XRRSB0(6)	YRRSBO(6)	ZRRSBU(6)	, XSSOCP(2)	, YSSOCP(2)	XRRSBO(6), YRRSBO(6), ZRRSBO(6), XSSOCP(2), YSSOCP(2), ZSSOCP(2).	
	+XSSDAP(2)	XSSDAP(2), YSSDAP(2), ZSSDAP(2), XESDAC	ZSSOAP(2)	XE SOAC	. YESOAC	, ZESOAC .	
	+XSRCSAC	YSRCSAC	ZSRCSAC	XSSDAC	. YSSOAC	, ZSSDAC ,	
		YRSOSB	ZRSOSB	XRRSBOT	YRRSBOT	. ZRRSBOT .	
02		YRRSB	ZRRSB	, xSSOCH(3)	. YSSOCH(3)	YRRSB , ZRRSB , XSSOCH(3), YSSOCH(3), ZSSOCH(3).	
	_	YAACSD	ZAACSO	.XASDAC	, YASDAC	. ZASOAC .	
		. YRSOAC	. ZRSOAC	XSCPAP(2)	, YSCPAP(2)	XSCPAP(2), YSCPAP(2), ZSCPAP(2)	
•		* * * * * * * * * *	* * * * * * * * * * * * * * * * * * * *	****	*******	*****	

| TESTSO(6) | TMSESO(6) | TNSESO(6) | TNSESO(6) | TNRKSO(6) | TNRK 8

75

92

8

RE TURN END

CONT INUE

9000

SUBROUTINE UPDVECT  C DESCRIPTION - LEVEL 2  C DESCRIPTION - LEVEL 2  C DESCRIPTION - LEVEL 2  C COMMUNICATIONS - CALCULATE NEW CG VECTOR VARIABLE C  C CALLO BY:  C COMMON /ISETAL COMMON BLOCK  C COMMON /ISETAL / XPOSSRP, YPOSSRP,	FIN 4.61428 83/11/07. 09 41 53	FF S	••••		) . IYYSO . IYZSO	RP. XCGSA . YCGSA IXZSA . IYYSA	CS. ZPOSSCS TYSA .	) . DCMSA(3,3) . ) . DCMTE(3,3) . ) . DCMSR(3,3) .	•	MAXEVNT LU I HEADVEL HEADPIT
ं के कहा राष्ट्रभारत के कि कि कि के प्रश्निक की किया किया किया किया किया किया किया किया	74/74 OPT=1	 DESCRIPTION - LEVEL 2 FUNCTION - NDRWALIZES VECTORS METHOD - CALCULATE NEW CG VECTOR VARIABLES COMMUNICATIONS - CALLED BY: GALS	TE ES	XCGSO YCGSO XCGSO XXCSO XCGSO XCGSO XCGSO XCGGSO XCCGSO XCGGSO XCCGSO XCGGSO XCCGSO XCCGSO XCCGSO XCCGSO XCCGSO XCCGSO XCCGSO XCCCCS XCCCCCCCCCCCC XCCCCCCCCCCCCCCC	XXSO , IXYSO , IXZSO ZZSO , IXXOA , IXYDA YZOA , IZZOA	POSSRP, YPOSSRP, CGSA, 1XXSA, YZSA, 1ZZSA, MCHZSA, MCH	ZPOSBOT, XPOSSCS, IXXSA, IXYSA, IZZSA	/ DCMAE(3,3) . DCMRA(3,3) DCMSE(3,3) . DCMTS(3,3) DCMSE(3,3) DCMOSE(3,3) DCMOME(3,3) DCMOME(3,3)		• • • •

C WOMARMS COMMON BLDCK	XACCEL(3) REPTYPE	YACCEL(3) BIAS	, ZACCEL(3) , PRTLNGT
MOMARMS COMMON		PRIMASS	, PRTINDX
	BLOCK		
COMMON /MOMARMS +RFFINSO RFFIN	OMARMS / DEFINA	URX(6)	UR2(6)
+XSSOCA(2),	2), ZSSOCA(2)	XSSORK(6), YSSORK(	6),2550RK(6),
+XSSOMRE , YSSOMRE , YSSOMRE	ZSSOMRE		
+XSSCSAC ,	YSSCSAC ZSSCSAC		
+XSSASRP ,	+XSSASRP ,YSSASRP ,XRRDAP(2),YRRDAP(2)	, XRRDAP(2), YRRDAP(	2), ZRRDAP(2),
+XSSDAP(2).	+XSSDAP(2), YSSDAP(2), ZSSDAP(2), XESDAC	, XESDAC YESDAC	, ZESOAC .
+XSRCSAC , +XRSOSB ,	YSRCSAC , ZSRCSAC , YRSOSB , ZRSOSB	.XSSOAC .YSSOAC ,XRRSBOT ,XRRSBOT	ZSSOAC . ZRRSBOT .
+XRRSB +XAACSD		3)	3),ZSSOCH(3), ZASDAC
	YRSOAC , ZRSOAC	.XSCPAP(2), YSCPAP(2)	
C INTEGRATION RO	INTEGRATION ROUTINE COMMON BLOCK	•	
	COMMON /RKUTIA / TIME . TIMES .	S DELIAT TRAJSO(193	TRAUSO(193)
+		•	TRAJCH(97,3)
+ +	TRAJAC(193)	. TVCEQS(225) ,	OUATSO(65)
•	INTSTP	IPCPASS	IRKPASS
•	IPOINTS	. IYX	IYPRX .
+ +	IKX IVI	. IKSUMX	IKPASSA ,
• •	XEIAI	IYPRIX	IYPRI1X
+	IYPR12X	. IPVIX	IPYI 1X
+	ICAIX	. ICYLIX	IREIN
IF (INTSTP	. EQ. O) RETURN		
C	*****	***************	**********
C CALCULATE VECT	CALCULATE VECTORS TO BE USED IN INIVECT, INITRAJ, & DARTFM	NIVECT, INITRAL, &	& DARTEM .
XESOAC=TRA YESOAC=TRA	XESOAC=TRAJAC(2)-TRAJSO(2) YESOAC=TRAJAC(3)-TRAJSO(3) PESOAC=TRAJAC(4)-TRAJSO(4)		
CALL ROTATE CALL ROTATE CALL ROTATE	CALL ROTATE (XESDAC, XSSDAC, ZVECT, DCMSE, O) CALL ROTATE (XESDAC, XASDAC, ZVECT, DCMAE, O) CALL ROTATE (XSSDAC, XRSDAC, ZVECT, DCMSR, 1)	FECT, DCMSE, 0) FECT, DCMAE, 0) FECT, DCMSR, 1)	
XAACSO=-XASOAC	SOAC		
ZAACSD= -ZASOAC	SOAC		
XSSCSAC = XS	XSSCSAC		
ZSSCSAC= ZS	255C5AC=25S0AC+2CG50	•	

PAGE
83/11/07. 09.41.53
FTN 4.6+428
0PT=1
14/74
SUBROUTINE UPDVECT

CALL ROTATE (XRSOAC.XSSOMRE,XRRCSAC,DCMSR,O)
CALL ROTATE(XSSOBOT,XRSBOT,XSSOMRE,DCMSR,1)
RETURN

SUBROUTINE VERTSK

```
ADTH = ABSOLUTE VALUE OF TOTH

ANG1 = ONE OF TWO ANGLES GENERATED BY THE SIGNAL TRANSFER •
EQUATIONS, USED TO DETERMINE THE ROCKET THRUST LINE •
ANG2 = NONE OF TWO ANGLES GENERATED BY THE SIGNAL TRANSFER •
EQUATIONS, USED TO DETERMINE THE ROCKET THRUST LINE •
TVCDERV(14) = EQUIVALENCED TO TVCEQS(16) = THE DERIVATIVES OF THE •
TVCVALS(14) = EQUIVALENCED TO TVCEQS(2) = THRUST VECTOR CONTROL •
SIGNAL TRANSFER EQUATIONS
FOR EASE OF PROBABLE FUTURE IMPLEMENTATION OF YAW CONTROL, •
THESE EQUIVALENCE STATEMENTS ARE USED.
             FUNCTION - CONTROLS SIMULATION OF THE VERTICAL SEEKING MANEUVER -
METHOD - SIMULATION OF THE VERTICAL SEEKING MANEUVER IS BASED -
ON WORK DONE AT CHINA LAKE. CURRENTLY, IT IS ASSUMED-
IHAT THERE IS ONLY ONE ROCKET ON THE SEAT BOTTOM,
WHICH CAN BE GIMBALLED TO CONTROL ROLL AND PITCH
MOVEMENT. ON THE SEAT, THE MICROPROCESSOR UPDATES -
THE DIRECTION COSINES SPECIFYING THE ORIENTATION OF -
OF THE SEAT, BASICALLY EVERY 1.25 MILLISECONDS FROM -
TIME ZERO TO ROCKET BURNOUT. FROM ROCKET IGNITION -
(+ AN INPUT TIME DELAY) UNTIL ROCKET BURNOUT IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TVCDERV(10)+
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TVCDERV(11).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IVCDERV(12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TVCDERV(1)
TVCDERV(2)
TVCDERV(3)
TVCDERV(4)
TVCDERV(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TVCDERV(6)
TVCDERV(7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IVCDERV(8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TVCDERV(9)
                                                                                                                                                                                                                                                                                                                              ANGR(I) = ROTATIONAL RATES OF SEAT/OCCUPANT IN THE TVC C.S.
PHIT = INTERMEDIATE VALUE FOR ROLL ROCKET POSITION
THETAT = INTERMEDIATE VALUE FOR PITCH ROCKET POSITION
TDTH = TOTAL ROLL, PITCH OR YAW ANGULAR DISPLACEMENT,
COMPARED AGAINST MAXIMUM ALLOWED BEFORE
UPDATING DIRECTION COSINES
                                                                                                                                                                                                 THE DERIVATIVES FOR THE SIGNAL TRANSFER EQUATIONS ARE CALCULATED, AND THE TWO OUTPUT COMMANDS ARE GENERATED (EVERY OTHER TIME STEP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVC ARRAY
TVCEQS(16)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TVCE0S(19)
TVCE0S(20)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TVCEOS(26)
TVCEOS(27)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | VCEQS(21)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rvce05(22)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FVCEOS(23)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TVCE0S(17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rvcEos(29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IVCE 05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IVCEQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DERIVATIVES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE FOLLOWING GIVES THE RELATIONSHIP BETWEEN THE VARIABLES IN THE CHINA LAKE POGRAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHINA LAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XD 19
XD 2 1
XD 2 7
XD 2 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XD29
XD30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      XD31
XD32
XD33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            XD34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TVCVALS(1)
TVCVALS(2)
TVCVALS(3)
TVCVALS(4)
TVCVALS(5)
TVCVALS(6)
TVCVALS(6)
TVCVALS(6)
TVCVALS(8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FVCVALS(10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TVCVALS(11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E001
                                                                                                                                                                                                                                                                                                               NON-COMMON VARIABLES DEFINED:
                                                                                                                                                                                                                                                                         SEATOCC
DESCRIPTION - LEVEL 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHINA LAKE TVC ARRAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TVCEQS(2)
TVCEQS(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TVCEQS(10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TVCEQS(11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TVCEQS(12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TVCEQS(13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TVCEQS(9)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TVCEQS(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IVCEQS(6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 VCE QS (8)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TVCEQS(4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1VCEQS(7)
                                                                                                                                                                                                                                                                                            CALLS: ROTATE
                                                                                                                                                                                                                                                            COMMUNICATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VALUES
                                                                                                                                                                                                                                                                              CALLED BY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပပပ
                                                                                                                               0
                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                       ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                       25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
S
```

83/11/07, 09.41.53

FTN 4.6+428

74/74 OPT=1

C SECTION 12 COMMON BLOCK  C MATRIX C MATRIX BLOCK BLOCK BLOCK BLOCK  MATRIX BRITHOT  MATRIX B		************	**********	1 VCE US ( 29 )	778   ACEGN(13)   ACAMENG
COMMON /ITVCIN /ITVC WHII WEST WHEE  COMMON /ITVCIN /ITVC WHII WEST WHEE  REAL  AFRIX COMMON BLOCK  COMMON /MATRIX / COME(E.3.) DCMMS(3.3) DCMMS(3.3)  COMMON /MATRIX / COME(E.3.) DCMMS(3.3) DCMMS(3.3)  COMMON /MATRIX / COMMON BLOCK  COMMON /MISC / LOGARE(T.3.) DCMMS(3.3) DCMMS(3.3)  FEELANCOLL SDATA COMMON BLOCK  COMMON /MISC / LOGARE(T.3.) LINCT(3.)  FEELANCOLL READLY  FEERANCOLL READLY  FEELANCOLL READLY  FEERANCOLL READLY  FEELANCOLL READLY  FEEDALY  FEELANCOLL READLY  FEELANCOLL READLY  FEELANCOLL					
COMMON /ITVCIN / ITVC  RAANG RAANG REAL  MPHI MPSI MTHE  RAANG RANGA RAN	ECTION 12 COMMON BLOC	Y	**********	***	*********
### ##################################	COMMON /ITVGIN /	ITVC . MPF	H MPS1	, MTHE	
REAL   MITHER   MITHER   MITHER	• •		ICHRL, SMPLRA	1, 1VCDI	٠Α٧.
ATRIX COMMON BLOCK	REAL	MPHI MPS	SI , MTHE		
COMMON / WARRIX / DCME(5.3.3) DCMRA(5.3.3) DCMRA(3.3) .  + DCMSE(3.3.4) DCMRA(5.3.3) DCMRE(3.3) .  + DCMOUN(3.3) DCMSE(3.3.3) DCMSE(3.3) .  + DCMOUN(3.3) DCMSE(3.3) DCMSE(3.3) .  - DCMSE(3.3) DCMSE(3.3) DCMSE(3.3) .  - INSCELLANEOUS DATA COMMON RECOVER HEADVEL HEADVEL HEADVEL HEADS HEADS HEADNEL HEADVEL HEADS HEADS HEADNEL HEADVEL HEADS HEADS HEADS HEADVEL SVECT(3) .  - HEADS HEADS HEADS HEADWEL BLAS HEADVEL HEADVEL HEADVEL HEADVEL HEADVEL HEADVEL HEADVEL HEADVEL HEADS HEADVEL SVECT(3) SAVITME AND SAV	MATRIX COMMON RIDCK	******	****	*****	****
COMMON / MATRIX / DCMAE(3.3) DCMRA(3.3) DCMS(3.3) .  + DCMSE(3.3) DCMSE(3.3) DCMSE(3.3) .  + DCMDUN(3.3) DCMSE(3.3) DCMSE(3.3) DCMSE(3.3) .  + DCMDUN / MISC / IPAGECT(31) ILINECT(31) MAXENT .  + MAXLINE   IERRELG   LUU   LUU   LUU   LADDYN   HEADREL	•		***********		*********
			DCMRA(3,3)	DCMSA	(3,3)
11SCELLAMEOUS DATA COMMON G.3)	• •	DCMSE(3,3),			(3,3)
ISCELLAMEOUS DATA COMMON BLOCK	*	<b>DCMDUM(3,3)</b>			
COMMON /MISC / IPAGECT(31) . LINECT(31) . IPRTCNT(31)	ISCELLANEOUS DATA COM	MON BLOCK	* * * * * * * * * * * * * * * * * * * *		• • •
### ##################################	· · · · · · · · · · · · · · · · · · ·	107101010101010101010101010101010101010		•	••••
+ HEADALT HEADAN HEADAN HEADALT HEADAN HEADALT HEADAN HEADALT DEPTONE DETENTION PRINCE DETENTION NECEL(3) NETAND NETA	+	MAXI INF	MAXREDI	•	MAXEVNT
+ HEADSR	+	I EVL INE	IERRFLG	•	רח
+ HEADSR	•	IDATE	HEADALT		HEADVEL
+ HEADROL	+	HEADSR	HEADYAW.	•	HE ADP I I
### REPTYPE(5.31)	•	HEADROL	, HEADWGT	•	BIAS
+ HEADER(24) , IEVENTS(38) , TIMES(38)   + FIMADC	+	REPTYPE (5,31		. (2	PRIWGHT(2)
HWDC	+	IHEADER(24)	, IEVENTS(	38)	TIMES(38)
+ PRTMASS(2) . PRTINDX	+		IMVDC	•	PRTEMP( 2)
+ XACCEL(3) , XYZ(3) , SAVTIME   + XACCEL(3) , YACCEL(3) , ZACCEL(3)   + PRIMASS	•	PRTMASS(2)	PRTINDX	•	PKZVEL.
• • • • • • • • • • • • • • • •	<b>*</b>	2VEC1(3)	. ATE(3)	•	SAVIJME
+ PRIMESS	++	XACCEL(3) DEDIVOE	, YACCEL(3	•	ZACCEL(3)
+ PRTINDX    PRTEMP	+	PRIMGHI		•	
### COMMON BLOCK  COMMON /MOMARMS /  *REFLNSO	• +	PRTEMP	PRTMASS	•	PRTINDX
CDMMON /MOMARMS /  *REFLNSO REFLNOA REFLNSA URX(6) URY(6) .URZ(6) .  *XSSORA(2) XSSOCA(2) XSSORK(6), YSSORK(6), ZSSORK(6), XSSORK(6), XSSORY(6), XSSORY(6)	INMARMS COMMON BLOCK	• • • • • • • • • • •	****	•	
COMMON / MOMARMS / +REFLNSO .REFLNSA .URX(6) .URY(6) .URZ(6) -XSSOCA(2).ZSSOCA(2).XSSORK(6),YSSORK(6),ZSSORK(6), -XSSORRE .YSSORRE .ZSSORRE .ZSSORRE .ZSSORRE .YSSORRE .YSSORRE .YSSORRE .YSSORRE .XSSOBOT .YSSOBOT .ZSSOBOT .XSSOBOT .XSBOBOT .XSSOBOT .XSSOBOT .XSSOBOT .XSBOBOT .XSBOBOT .XSBOBOT .XSBOBOT .XSSOBOT .XSBOBOT .XSBOBO	***************************************	• • • • • • • • • • •	••••••		
+REFLNSO , REFLNDA , REFLNSA , URX(6) , URY(6) , URZ(6) , XSSOCA(2), XSSOCA(2), XSSOCRK(6), YSSOCRK(6), ZSSOCRK(6), XSSOCRK(6), YSSOCRK (6), YSSOCRK (6), XSSOCRK (7), XSSOCR (7),	COMMON /MOMARMS /				
+XSSOCA(2), YSSOCA(2), XSSORK(6), YSSORK(6), ZSSORK(6), XSSORRE , XSSORRI , XSSORRI , XSSOSRO , XSSORO	+REFLNSO , REFLNDA	, REFLNSA .	. URX(6) . UR	, (e)	.URZ(6) .
+XSSORRE ,YSSORRE ,ZSSORRE ,XSSOLRE ,YSSOLRE ,ZSSOLRE , +XSSORRE ,YSSORRE ,ZSSORRE ,XSSOBOT ,YSSOBOT ,ZSSOBOT , +XSSOSRG	+XSS0CA(2), YSS0CA(2	), ZSSOCA(2),	XSSORK(6), YS	SORK(6)	ZSSORK(6),
+XSSOBME ,YSSOBME ,ZSSOBME ,XSSOBOT ,YSSOBOT ,ZSSOBOT , +XSSOSAC ,YSSOSAC ,ZSSOSAC ,XSSOSRP ,YSSOSRP ,ZSSOSRP ,ZSSORP ,	+XSSORRE , YSSORRE	, ZSSORRE	XSSOLRE , YS	SOLRE	ZSSOLRE .
+XSSOSB(6), YSSOSB(6), ZSSOSB(6), XRRCSAC, YRRCSAC, ZRRCSAC, YSSOSAC, YSSOSAC, ZSSOSAC, ZSSOSAP, YSSOSRP, ZSSOSRP, ZSSOS					ZSS080T
+XSSCSAC ,YSSCSAC ,ZSSCSAC ,XSSOSRP ,YSSOSRP ,ZSDSRP ,ZSRMPE ,XSSASRP ,YSSASRP ,ZSSASRP ,ZSSASRP ,XRRDAP(2),YRRDAP(2),ZRRDAP(2),ZRRDAP(2),ZRRDAP(2),ZRSGORP ,ZSSOCP(2),YSSOAC ,ZSSOAC ,ZSSOAC ,ZSSOAC ,XSSOAC ,XSSOAC ,ZSSOAC ,XSSOAC ,XSSOAC ,ZSSOAC ,XSSOAC	+XSSDSB(6), YSSDSB(6	. 255058(6)			ZRRCSAC
+ XSSASRP	OARORA OARORX+	755CSAC	•		25505PP
+XSSASRP ,YSSASRP ,ZSSASRP ,XRRDAP(2),YRRDAP(2),ZSRDAP(2), +XRRSBO(6),YRRSBO(6),ZRRSBO(6),XSSOCP(2),YSSOCP(2), +XSSDAP(2),YSSDAP(2),ZSSDAP(2),XESDAC ,YESOAC ,ZESDAC , +XSRCSAC ,YSRCSAC ,XSSOAC ,YSSOAC ,ZSSOAC , +XRSOSB ,YRSOSB ,XRSOBT ,ZRRSBOT , +XRSOSB ,YRRSB ,XSSOCH(3),YSSOCH(3), +XAROSO ,YAROSO ,ZAACSO ,XASOAC ,ZSSOAC , +XRSOAC ,YRSOAC ,ZRSOAC ,XSCDAP(2),YSCPAP(2),					ZARMPE
+XRRSBO(6),YRRSBO(6),ZRSBO(6),XSSOCP(2),YSSOCP(2),ZSSOCP(2), +XSSDAP(2),YSSDAP(2),ZSSDAP(2),XESDAC ,YESDAC ,ZESDAC , +XSRCSAC ,YSRCSAC ,ZSRCSAC ,XSSDAC ,ZSSDAC ,ZSSOAC , +XRSOSB ,YRSOSB ,XRSBOT ,YRRSBOT ,ZRRSBOT , +XRRSB ,YRRSB ,XRSOCH(3),YSSOCH(3),ZSOCH(3), +XAACSO ,YAACSO ,ZAACSO ,XSSOCAP(2),YSCDAP(2),ZSSDAP(2)	+XSSASRP YSSASRP	ZSSASRP	XRRDAP(2), YR	SDAP (2)	ZRRDAP(2).
+XSSDAP(2), VSSDAP(2), ZSSDAP(2), XESDAC , YESOAC , ZESDAC , XSSDAC , XSSDAC , XSSDAC , ZSSDAC , ZSSDAC , XSSDAC , ZSSDAC , ZRASBOT , XRSBOT , ZRASBOT , XRSDAC , ZSACSO , XASOAC , ZASDAC , ZASDAC , ZSCPAP(2), YSCDAP(2), YSCDAP(2), YSCDAP(2), YSCDAP(2), XSCDAP(2), YSCDAP(2), ZSCPAP(2)	+XRRSBO(6), YRRSBO(6	).ZRR580(6).	XSS0CP(2) YS	SOCP (2)	2550CP(2)
C YSRCSAC ZSRCSAC YRSOSB ZRSOSB YRRSB ZRRSB YAACSO ZAACSO YAACSO ZRACSO	+XSSDAP(2), YSSDAP(2	). ZSSDAP(2).	XESOAC	SOAC	ZESDAC
YRSOSB ZRSOSB YRRSB ZRRSB YAACSO ZAACSO YRSOAC ZRSOAC		ZSRCSAC	•		7550AC
YRRSB ZRRSB YAACSO ZAACSO YRSOAC ZRSOAC			_	_	ZDDSROT
YAACSO ZAACSO ,YASOAC ,ZASOAC			XX (E)HJUSSX	SOCH(3)	7550CH(31)
YRSOAC , ZRSDAC			XASOAC VA	SOCIAL SOCIAL	ZASOZII S.).
			XSCPAP(2) YS	PAP(2)	ZSCPAP(2)

PAGE

```
IVCDERV(12) = IVCVALS(11) - 48 26-IVCVALS(12) - 90992.0-IVCVALS(1) IVCDERV(13)=2.861+1000000.+PHIT-31.45-IVCVALS(13) IVCDERV(2) = IVCVALS(14) IVCVALS(14) = IVCVALS(14) - 48.26-IVCVALS(14) - 90992.0-IVCVALS(2) IF (IVCVALS(1) .LT. (PITCHRL+.025)) GO TO 120 IIF (IVCDERV(1) .LT. (PITCHRL+.025)) GO TO 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ITVCFLG=-ITVCFLG
THETAT = AMAX1 (THETAT, PITCHRL)
THETAT = AMIN1 (THETAT PITCHRL)
PHIT = AMAX1 (PHIT, ROLLRL)
PHIT = AMIN1 (PHIT, ROLLRL)
TVCDERV(11) = 2 861 • 1000000.0 • THETAT - 31.45 • TVCVALS(11)
TVCDERV(1) = 7 VCVALS(12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C INTEGRATE RATE DATA SIMULATING MICROPROCESSOR CODE C
                                                                                                                                                                                                                                                                    ( PITCHRL+ 025)) GØ TØ 130
0.) GØ TØ 130
                                                                                                                                                                                                                                                                                                                                                                                                                            IF (TVCDERV(2) .LT ( RDLLRL+ 025)) GD TO 150
IF (TVCDERV(2) .GT. 0.0) GD TO 150
TVCDERV(2) = 0.0
                                                                                                                                                                                                                                                                                                                                       IF (TVCVALS(2) LT. (ROLLRL+ 025)) GD TO 140
IF (TVCDERV(2) LT. 0.0) GD TO 150
TVCDERV(2) * 0.0
GD TO 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            220 DTH(11,2) * .0078125 * TDTH/ADTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CMPVAL = SMPLRAT • DELTAT

IF (ADTH GE, CMPVAL) GD TO 220

DTH(11,1) = TDTH

DTH(11,2) = 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DO 210 11=1,3
DTH(I1,2) = ANGR(I1) + DELTAT
TDIH = DIH(I1,2) + DTH(I1,1)
ADTH = ABS(TDTH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            URX(1) = SIN(ANG1) + CDS(ANG2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                URZ(1)=COS(ANG1)+COS(ANG2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ING1 - TVCVALS(1)+RKANG
                                                                                                                                                                                                                                                                       IF (TVCVALS(1) .LT
IF (TVCDERV(1) .GT.
TVCDERV(1) = 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ANG2 * TVCVALS(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              URY (1) = SIN(ANG2)
                                                                                                                                                                                                                     IVCDERV(1) = 0
                                                                                                                                                                                                                                        GO 10 130
                                                                                                                                                                                                                                                                                                                               CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                     CONT INUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  200 CONTINUE
                                                                                                                                                                                                                                                          CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           150
                                                                                                                                                                                                                                                                                                                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           225
                                                                                                                                   180
                                                                                                                                                                                                                                                                                                              <u>6</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 205
                                             175
                                                                                                                                                                                                                          185
                                                                                                                                                                                                                                                                                                                                                                                                     195
```

DTH(11,1) \* TDTH-. 0078125+TDTH/ADTH

```
CONTINUE

IF (D3(1) NE. O.O. DR. D3(2) NE. O.O) GD TD 320

RKTCMND(1) * 2.0

RKTCMND(1) * 2.0

RKTCMND(1) * 0.0

RKTCMND(2) * 0.0

GD TD 9000

CONTINUE
                C UPDATE DIRECTION COSINES USING CROWDER-HESSION ALGORITHM
C SACRESSION ALGORITHM
                                                                                                                                                                                                   C UPDATE COMMANDS EVERY OTHER TIME STEP IF BETWEEN ROCKET IGNITION C PLUS INPUT TIME DELAY AND ROCKET BURNOUT
                                                          IF (ABS(D3(1)) .GE. ABS(D3(2))) GO TO 330

RKTCMND(1) = 2.0-ABS(D3(2))

IF (D3(2) .NE. 0.0) RKTCMND(1)=-RKTCMND(1)+D3(2)/ABS(D3(2))

RKTCMND(2) = D3(1)

GO TO 9000

CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RKTCMND(1)=-D3(2)
RKTCMND(2)=2.0-ABS(D3(1))
RFTCMND(2)=2.0-ABS(D3(1))
FF (D3(1) .NE. O.O) RKTCMND(2)=RKTCMND(2)+D3(1)/ABS(D3(1))
CONTINUE
RETURN
                                                                           D3(2) = D3(2) - DTH(3.2) + D3(1)
D3(3) = D3(3) + DTH(2.2) + D3(1)
D3(1) = D3(1) + DTH(3.2) + D3(2)
D3(3) = D3(3) - D7H(1.2) + D3(2)
D3(1) = D3(1) - DTH(2.2) + D3(3)
D3(2) = D3(2) + DTH(1,2) + D3(3)
                                                                                                                                                                                                                                                                                IF (17VCFLG .LT. 0) GD TO 9000
IF (D3(3) .LT. 0.0) GD TO 310
RKTCMND(1) = -D3(2)
RKTCMND(2) = D3(1)
GD TO 9000
                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9006
230
                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                          245
                                                                                                                                                                                                                                                                                                                                                                                                             250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    260
                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      265
```

```
307
    83/11/07, 09.41.53
                                                                                                                                    FUNCTION ZARCTAN(A,B)

DESCRIPTION - LEVEL 4

FUNCTION - COMPUTES THE ARCTANGENT OF A/B

METHOD - DETERMINES THE CORRECT QUADRANT AND USES THE SYSTEM •

COMMUNICATIONS - COMMUNICATION ATANZ

CALLED BY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FTN 4.6+428
                                                                                                                                                                           C DESCRIPTION - LEVEL 4
C DESCRIPTION - LEVEL 4
C METHOD - DETERMINES THE CORRECT QUAD
C C METHOD - DETERMINES THE CORRECT QUAD
C C CALLED BY:
C CAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.0) GD TD 100
0.0) ZARCTAN = W
0.0) ZARCTAN = -W
. 0.0) ZARCTAN = 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATA W/1.5707963267949/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IF(B .NE 0.0) GD TO I

IF(A .GT. 0.0) ZARCTAN

IF(A .LT. 0.0) ZARCTAN

IF(A .EQ. 0.0) ZARCTAN

GD TO 200

O ZARCTAN = ATAN2(A.B)

O CONTINUE

RETURN
    0PT = 1
    74/74
        FUNCTION ZARCTAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52
```

DESCRIPTION - LEVEL 3

SUBRUUTINE ZLININT(XINPUT, TABLE, NPDINTS, MAXPTS, ANSWER, INDEX)

```
************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NARROW SEARCH TO FIVE ELEMENT RANGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *******************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              THIS SUBROUTINE PERFORMS LINEAR INTERPOLATION ON A TWO DIMENSIONAL TABLE USING THE STANDARD LINEAR INTERPOLATION FORMULA.

INTERPOLATION FORMULA.

IN ORDER TO REDUCE THE NUMBER DF CALCULATIONS, THE SUBROUTINE FIRST SEARCHES FOR A FIVE ELEMENT RANGE THAT CONTAINS THE INDEPENDENT VARIABLE. THIS RANGE IS THEN SEARCHED TO FIND THE EXACT VALUE TO BE RETURNED. IF THE INDEPENDENT VARIABLE IS FQUAL TO A TABLE ELEMENT, THE CORRESPONDING ELEMENT IS RETURNED. IF THE INDEPENDENT VARIABLE LIFS BETWEEN TWO TABLE ELEMENTS, THE RESULT IS DETERMINED USING THE STANDARD LINEAR INTERPOLATION FORMULA. THIS SUBROUTINE ALSO CHECKS FOR ERRORS IN THE TABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TABLE - TWO DIMENSIONAL ARRAY WITH INTERPOLATION VALUES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF (ISTOP GT. NPOINTS) ISTOP = NPOINTS

IF (TABLE(I.ISTOP) .EQ. XINPUT) GG TO 200

IF (TABLE(I.ISTOP) .GT. XINPUT) GO TO 20

IF (TABLE(I.ISTOP) .LT. XINPUT) GO TO 20

IF((TABLE(I.ISTOP) .LT. XINPUT) .AND (ISTOP .EQ. NPOINTS)) GOTO ...

ISTARI = ISTARI + 5
                                                                                                                                                                                                                                                                                                                                                                                                                          CALLED BY: AIRCRFT, CATAFM, RKTFM, DROGUE 1, DROGUE2, INITRAJ, RECOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DO 30 I - ISTART, ISTOPI
IF (TABLE(1,1+1) .Eq. XINPUT) GO TO 300
IF (TABLE(1,1) .LT. XINPUT AND TABLE(1,1+1) .GT. XINPUT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 XINPUT - INDEPENDENT VARIABLE TO BE INTERPOLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NPOINTS - NUMBER OF POINTS IN TABLE
MAXPTS - MAXIMUN NUMBER OF POINTS IN TABLE
ANSWER - VALUE TO BE RETURNED
INDEX - NUMBER OF COLUMNS IN TABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         START - START POINT OF FIVE ELEMENT RANGE ISTOP - SIOP POINT OF FIVE ELEMENT RANGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DIMENSION TABLE (INDEX, MAXPTS), ANSWER (INDEX)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 IF (TABLE(1, ISTART) . EQ. XINPUT) GO 10 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C FIND FIVE ELEMENT RANGE IN WHICH VALUE LIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C POTENTIAL ERROR CONDITIONS: NONE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NON-COMMON VARIABLES DEFINED: CALL PARAMETERS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1510P = 151ART + 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20 ISTOP1 = ISTOP - 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER VARIABLES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ISTART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO TO 400
                                                                                                                                                                                                                                                                                                                                                                                                   COMMUNICATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NONE
                                                                                               ME THOD .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO TO 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30 CONTINUE
               FUNCT I ON
                                                                                                                                                                                                                                                                                                                                                                                                                                                        CALLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ပ ပ ပ
                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25
                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      55
```

```
309
PAGE
83/11/07. 09.41.53
                                                                         C RETURN ANSWER

C RETURN ANSWER

C RETURN ANSWER

100 DD 150 J=2 INDEX

ANSWER(J-1) = TABLE(J,ISTART)

150 CONTINUE

GD TO 1000

200 DD 250 J=2 INDEX

ANSWER(J-1) = TABLE(J,ISTOP)

250 CONTINUE

GD TO 1000

400 DD 450 J=2, INDEX

ANSWER(J-1) = TABLE(J,I1)

450 CONTINUE

1000 RETURN

TABLE(J,I+1) - TABLE(J,I+1) - TABLE(J,I+1)

450 CONTINUE

1000 RETURN

END
FIN 4 6+428
                                ANSWER(J-1) * TABLE(J, NPDINIS)
40 CONTINUE
74/74 OPT=1
                                                                GO TO 1000
SUBROUTINE ZLININI
                                                                   9
                                                                                                                                                                                                                                                                     75
                                                                                                                                   65
                                                                                                                                                                                                    70
                                                                                                                                                                                                                                                                                                                                        8
```

## 6.0 REFERENCES

- 1. White, B. J., Aeromechanical Properties of Ejection Seat Escape Systems, Technical Report AFFDL-TR-74-57, Air Force Flight Dynamics Laboratory, Wright-Patterson Air Force Base, Ohio, April 1974.
- 2. ACT, A CDC 6700 Computer Program for Generating Random Files of Aerodynamic Coefficient Tables, Technical Note TN-K-1/74, Naval Weapons Laboratory, Dahlgren, Virginia, January 1974.
- 3. Hardy, S., unpublished notes of ICARUS program validation, Aerobalistics Division, Naval Weapons Laboratory, Dahlgren, Virginia.
- Control Data Cyber 70 Series Models 72/73/74 6000 Series Computer Systems KRONOS 2.1 Reference Manual. Publication Number 60407000. Control Data Corporation, March 20, 1979.

(THIS PAGE INTENTIONALLY LEFT BLANK)

```
PAGE
  83/09/08. 16.09.54
                                                                                                                                                                            IDENT - THE TABLE NAME

NCGE - THE TOTAL NUMBER OF COEFFICIENTS,

MUST BE LESS THAN OR EQUAL TO 700

ISEQNO - THE SEQUENCE NO. OF THE TABLE TO BE REPLACED(WHEN MODE=3)

READ(10, 120) IDENT, NCGEF, ISEQNO

FORMAT(A10, 15, 15)
    FIN 4.6+428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 THE TABLE THAT WAS CREATED IS NOW PRINTED OUT CALL PTOUT WORKA, INAL, INBE, INMA)
IF (IERTEST.EQ.3) IERTEST=0
THIS PROCESS IS CARRIED OUT UNTIL ALL TABLES, AS SPECIFIED BY NOFTABS, HAVE BEEN READ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    READ THE INFO ARRAY ON THE FIRST PASS OF AN EXTENSION RUN
IF (MODE.EQ. 2. AND.MTEST.EQ. 0)CALL WRINFO(2)
IF (IERTEST.EQ. 1)GQ TO 12
IF (ITYPE.EQ. 1)INFO3(IC.1)=IDENT
IF (ITYPE.EQ. 2)INFO3(IC.1)=IDENT
CALL ROUTINE TO READ THE DATA FOR EACH TABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C PRIOR TO REPLACING A TABLE, THE RANDOM FILE CONTAINING C THE INFO ARRAY MUST BE READ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LIST OPTION, DETERMINE THE NUMBER OF TABLES ON FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IF(IERTEST.EQ.2)CALL ERMSG(4)
C AFTER ALL TABLES HAVE BEEN CREATED, THE INFO ARRAY IS
C WRITTEN TO THE PROPER RANDOM FILE
95 CALL WDINFA'''
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            THE PTOUT ROUTINE NOW PRINTS OUT THE FILE DICTIONARY
                                                                                                           IF (MODE NE.2)IC=ICOUNT
IF (MODE.EQ.2.AND.MTEST.NE.O)IC=IC+1
THE THIRD CARD OF THE DATA DECK DEFINESO
                                                                                                                                                                                                                                                                                                              IF(MODE.EQ.3)GO TO 18
IF(MODE.EQ.2.AND.MTEST.EQ.O)GD TO 16
                                                                                                                                                                                                                                                                                                                                                         IF (ITYPE.EQ. 1) INFO2(IC. 1) = IDENT
IF (ITYPE.EQ. 2) INFO3(IC. 1) = IDENT
IF (NCOFF. GT. 700) FOALL ERMSG(2)
IF (IERTEST.EQ. 3)GD TO 9
IF (MODE.NE. 3)GO TO 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IF(ITYPE.EQ.2)I3NO=IC
IF(ITYPE.EQ.1)I2ND=IC
IF(IC.EQ.0)GO TO 94
IF(MODE.EQ.3)CALL WRINFO(2)
                                                                   THE CURRENT TABLE NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CALL INPUTT(WORKA, NCDEF)
IF (IERTEST. EQ. 4)GO TO 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IF ( IERTEST. EQ. 3)GD TO 9 IC=ITABNO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CALL PIOUT (WORKA, 1, 1, 1)
                                                                                          DO 11 ICOUNT # 1. NOFTAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IF (MODE NE 5)GO TO 97
    0PT = 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALL WRINFO(3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALL WRINFO(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INAL = NAL + . 50
INBE = NBE + . 50
INMA = NMA+ . 50
  74/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GO TO 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO TO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MTEST=9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
PROGRAM ACT
                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ၂ 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ပ
                                                                                                                 မ္မ
                                                                                                                                                                                                                            65
                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ô
```

IF ( 1TYPE, EQ. 1)NT=12ND

```
83/09/08, 16.09.54
IF (ITYPE.EQ.2)NT=I3ND
MIEST=1
DO 20 IC=1,NT
C READ THE ARRODYNAMIC COEFFICIENTS INLU MEMORY
CALL READRF(IC, WORKA)
IMAL=NAH-50
INMA=NMA+.50
INMA=NMA+.50
C PRINT OUT THE TABLE
CALL PTOUT (WORKA, INAL. INBE, INMA)
20 CONTINUE
97 MIEST=9
CALL PTOUT (WORKA, 1, 1, 1)
C PRINT OUT THE TABLE
CALL PTOUT (WORKA, 1, 1, 1)
C PRINT OUT THE TABLE
INMS=NMAH.50
OCNITINUE
97 MIEST=9
CALL PTOUT (WORKA, 1, 1, 1)
C PRINT OUT CP IIME USED
94 ITME-SECONOM(SECS)-ITME
IHOURS=IIME/3600.)/60.
MINS=AMOD(TIME, 3600.)/60.
MINS=AMOD(TIME, 3600.)/60.
MINS=AMOD(TIME, 3600.)/60.
MINS=AMOD(TIME, 3600.)/60.
IF (IEETS-IIME-FLOAT(MINS, 13.5H MINS, 13.5H SECS)
IF (IERTEST: EQ.4)STOP
60 TO 12
99 STOP
END
                                    PROGRAM ACT
                                                                                                                                                                                          120
                                                                                                =
                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             135
                                                                                                                                                                                                                                                                                      125
```

SUBROUTINE ERMSG

15	SUBROUTINE ERMSG(IERND)  THE SUBROUTINE ERMSG IS CALLED WHENEVER AN ERROR IS DETECTED.  IT PRINTS OUT AN APPROPRIATE ERROR MESSAGE AND TAKES THE NECESSARY CORRECTIVE ACTION. A FLAG (ERTEST) IS SET AND PASSED  TO THE CALLING ROUTINE. ERTEST * 1 PRESENT CASE IGNORED. READ NEXT TYPE 1 CARD	" " " & 🗦 🗟 ()	 -	RETURN PRINT 21 FORMAT(59H1000 ERROR 000 ATTEL (NTS) PRINT 22 FORMAT(15X, 61HTHIS TABLE 1S D 1EXT TABLE) READ(10,25) DUMMY FORMAT(A1)	READ( ERTESI RETURN PRINT FORMAT	-	FORMAT(15X,56HEXTENSION TABLES ARE DISREGARDED AND EXECUTION CONTI- INUES) PREAD(10,25) DUMMY READ(10,FMT) (DUMMY,1±1,NCOFF) READ(10,FMT) (DUMMY,1±1,NCOFF) IF (NOFTAB EQ 1)GO TO 58 READ(10,56) NCOFF READ(10,56) NCOFF FORMAT(10X,15)

2 2	READ(10.25) DUMMY READ(10,FMT) (DUMMY,J=1,NCOEF)	MY. J=1.NCOEF)				
ວ	CONTINUE					
₩ 2	ERTEST=1 Return	•				
ā	PRINT 61, 11YP(1)					
ĭ	DRMAT (39H1+++ ERF	ROR *** ATTEMPT	FORMAT (39H1*** ERROR *** ATTEMPTING TO EXTEND THE, 12, 32H-WAY TABLE	. 12.32H-WAY EAB	3LE	
\$ <u>9</u>	S BEYOND THEIR MAXIMUM)	(IMUM)				
<b>=</b>	JRMAT (15X, 70HTABL	ES WILL BE EXTE	FORMAT(15X, 70HTABLES WILL BE EXTENDED TO THEIR MAXIMUM AND THE REM	XIMUM AND THE R	ZEM	
4	AINDER DISREGARDED)	6				
3	LEFT-NOFTAB					
Ž	NDFTAB=31-1J					
=	LEFT=LEFT-NOFTAB					
₩	ERTEST=2					
æ	RETURN					
ā	PRINT 51, ITYP(2)	•				
ĕ	GO TO 52					
ā	PRINT 61, ITYP(2)					
_	LEFT = NOFTAB					
ž	NOF TAB = 21 - 1K					
<b>હ</b>	GO TO 65					
ž	NOFTAB*LEFT+1					
3	GO TO 57					
<u>~</u>	PRINT 91					
Ξ	DRMAT(77H1+++ ERF	SOR *** NUMBER (	FORMAT(77H1 ERROR NUMBER OF GIVEN DOES NOT EQUAL NUMBER OF	EQUAL NUMBER C	<u>۳</u>	
ੁ	DMPUTED COEFFICTE	ENTS./.15X.49HP	ICOMPUTED COEFFICIENTS./, 15x, 49HPROGRAM WILL END AFTER WRITING INFO	FTER WRITING IN	F-0	
7	2 ARRAY TO FILE)					
Ŧ	ERTEST*4					
æ	RETURN					
₩	5					

0P1 = 1

74/74

SUBROUTINE INPUTT

```
REAL NAL,NBE,NMA,MAMIN,MAMAX,IDENT
THE FOURTH CARD OF THE DATA DECK CONTAINS INFO. FOR
THE GENERATION OF THE TABLES
READ THE MAX, MIN, AND DELTA FOR ALPHA, BETA, AND MACH
READ(10,200) ALMIN,ALMAX,DELALP,BEMIN,BEMAX,DELBET,MAMIN,MAMAX,

1
DELMAC
                                                                    DIMENSION INFO2(30,10), INFO3(20,13)

EQUIVALENCE (INFO2(1,1), INFO3(1,1))

EQUIVALENCE (INFO2(1,1), INFO3(1,1))

COMMON/SHARE/FMT(8), NOFTAB, ITYPE, MODE, IC, ISEONO, MTEST, IBLNK

COMMON/RFINFO/INFO2(30,10)

COMMON/RANGE/INFOX(AL,NBE,NMA,DELALP,DELBET,DELMAC,ALMIN,

BEMIN,MAMIN,ALMAX,BEMAX,MAMAX,NTYP
SUBROUTINE INPUTT(WORKA, NCOEF)
INPUTT READS CARD TYPES 4 AND 5 AND DEFINES THE INFO ARRAY
DIMENSION WORKA(NCOEF)
                                                                                                                                                                                                                                                                                                                                                                                                                     C CALCULATE THE MUMBER OF BETA AND MACH
C CALCULATE THE MUMBER OF BETA AND MACH
IF (ITYPE:EQ. 1) GO TO 20
C INFO ARRAY FOR 3-WAY TABLES
C COMPUTE NUMBER OF ALPHA WHEN CREATING 3-WAY TABLES
INFO3(IC.3)=NAL
INFO3(IC.3)=NAE
INFO3(IC.3)=NAE
C DOES THE NUMBER OF ALPHA, BETA, AND WACH AGREE WITH
C THE GIVEN NUMBER OF COEFFICIENTS
MYCOEF=NAL**
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ##COFF NAL NACOFF) CALL ERMSG(9)
IF (NCOFF NAL NACOFF) CALL ERMSG(9)
IF (IERTES). EQ. 4) GO TO 32
INFO3(IC,5) = DELALP
INFO3(IC,7) = DELMAC
INFO3(IC,9) = MEMIN
INFO3(IC,9) = MEMIN
INFO3(IC,10) = MAMIN
INFO3(IC,10) = MAMAX
                                                                                                                                                                                                                   COMMON/ERCOM/NUMCO, IERTEST, 1J, IK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IF (NCOEF.NE.MYCOEF)CALL ERMSG(9)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFO ARRAY FOR 2-WAY TABLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF ( IERTEST. EQ. 4 )GD TO 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFO2(IC,5)*DELMAC
INFO2(IC,6)*BEMIN
INFO2(IC,7)*MAMIN
INFO2(IC,8)*BEMAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MYCDEF = NBE + NMA + . 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFO2 (IC. 4) = DELBET
                                                                                                                                                                                                                                        REAL INFO2, INFO3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFO2(1C, 2) =NBE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFO2(1C, 3) -NMA
                                                                                                                                                                                                                                                                                                                                                                                                        FORMAT (9F8.0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GO TO 21
                                                                                                                                                                                                                                                                                                                                                                                                        200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20 C
                                                                                                                                                                                                                                                                                                                                                                                                                                ں
                                                                                                                                                                                                                                                                                        0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ပပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ပပ
                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                       ŭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
```

0P1 = 1

SUBROUTINE INPUTT

```
DR THE FILE DICTIONARY
DIMENSION WORKA(NAL,NBE,NMA)
DIMENSION APH(250),BETA(250),MACH(250)
DIMENSION INFO2(30,10),INFO3(20,13)
DIMENSION OPT(5),TABNO(2),DICTI(2),DICT2(11)
EQUIVALENCE (INFO2(1,1)),INFO3(1,1))
COMMON/SHARE/FMT(8),NOFTAB,ITYPE,MODE,IC,ISEONO,MTEST,IBLNK
COMMON/SHARE/FMT(8),NOFTAB,ITYPE,MODE,IC,ISEONO,MTEST,IBLNK
COMMON/RANGE/IDENT,NALP,NBET,NMAC,DELALP,DELMAC,ALMIN,
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INTEGER OPT, TABNO, DICTI, DICT2, TAB1ST
REAL INFO2, INFO3
REAL INFO3
RE
SUBROUTINE PIDUT(WORKA, NAL, NBE, NMA)
THIS SUBROUTINE PRINTS THE AERODYNAMIC COEFFICIENT TABLES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINT 160, OPT(MODE), TABNO(1TYPE)
FORMAT(11H1NOW UNDER, A8,26HOPTION FOR RANDOM FILE OF
A5,12H-WAY TABLES.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IF (ITYPE.EQ.1)GO TO 31
COMPUTE ALPHA(1), BETA(1), AND MACH(1), USING THE
MIN., MAX., AND DELTA VALUES FOR THESE VARIABLES
ALPH(1)*ALMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TABISI SET = 1 WHEN A LINE IS CONTINUED NCARY USED TO INCREMENT THE NMA VALUES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C PRINT TABLE HEADER, NAME, AND NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORMAT(/, 16H TABLE NUMBER . 13)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FORMAI(14H TABLE NAME = , A10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMON/RF INFO/ INFO2 (30, 10)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DO 21 1=2,NBE
BETA(1)=BETA(1-1)+DELBET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DO 23 I=2,NAL
ALPH(I)=ALPH(I-1)+DELALP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MACH(I)=MACH(I-1)+DELMAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMON/NTABS/12NO.13NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1F(1TYPE.EQ.1)IN=1C+20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IF(11YPE.EQ.1)GO TO 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINT 150, IDENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MACH(1)=MAMIN
DO 20 I=2,NMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BETA(1)-BEMIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRINT 140, IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TABTST=0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NNMA = NMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCARY =0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
                                              U U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ပပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ပပ
                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
```

PAGE

16.09.54

83/09/08

FTN 4.6+428

SUBROUTINE PTOUT

PAGE

```
PRINT 130, J. IDENT, INFO3(J, 8), INFO3(J, 11), INFO3(J, 5), INFO3(J, 10), INFO3(J, 10), INFO3(J, 10), INFO3(J, 10), INFO3(J, 10), INFO3(J, 13), INFO3(J, 17), INFO3(J, 13), INFO3(J, 17), INFO3(J, 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO TO (123,124,125),NTYP
PRINT 134,K,IDENT,INFO2(J,6),INFO2(J,8),INFO2(J,4),
1
INFO2(J,7),INFO2(J,9),INFO2(J,5)
FDRMAT(I3,BX,A10,30X,6F10.4)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO TO 132
PRINT 135,K,IDENT,INFO2(J,6),INFO2(J,8),INFO2(J,4),
INFO2(J,7),INFO2(J,9),INFO2(J,5)
CONTINUE
RETURN
FORMATION ACTION 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO TO 132
PRINT 130.K.IDENT.INFO2(J.7),INFO2(J.9).INFO2(J.5).
INFO2(J.6).INFO2(J.8).INFD2(J.4)
PRINT 100,13ND,TABND(2)
FORMAT(30H1THIS RANDOM FILE NOW CONTAINS,I3,1X.AS,
                                                                                                                                                                                                         GO TO 102
PRINT 100. I2ND, TABNO(1)
PRINT 110
FORMAT(//.24H FILE DICTIONARY FOLLOWS.//)
PRINT 120.0ICT1
FORMAT(1x,11410./)
PRINT 120.0ICT2
IF(ITYPE.E0.1)GO TO 131
DO 121 J-1,I3NO
IDENT=INFO3(J,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    K=J+20
IDENT=INFO2(J,1)
NTYP=INFO2(J,10)
C PRINT VALUES IN CORRECT COLUMNS
C CHECK WHICH TYPE OF TWO-WAY TABLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DO 132 J=1,12NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                                                                                                                                                                    5 <u>5</u> 5 5
                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 150
              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               140
```

Ξ

```
PAGE
 54
   60
   9
 80/60/68
                                                 SUBROUTINE READS THE TABLES FROM THE RANDOM FILE TO MEMORY DIMENSION WORKA(700) DIMENSION WORKA(700) DIMENSION IF2(2), 10), IF3(20,13) EQUIVALENCE [IF2(1,1), IF3(20,13) COMMON/SHARE/[IF2(1,1), IF3(1,1)) COMMON/SHARE/[IF2(1,1), IF3(1,1)) BEMIN, MAMIN, BELALP, DELBET, DELMAC, ALMIN, 1
FTN 4 6+428
                                                                                                                                                                                            COMMON/RFINED/IF2(30,10)

REAL NAL, NBE, NAA, MAMIN, MAMAX, IDENT
GO TO (10,20), ITYPE
IDENT=FF2(IT,1)

NBE=IF2(IT,1)

NBE=IF2(IT,2)

NMA=IF2(IT,3)

DELMAC=IF2(IT,6)

BEMAX=IF2(IT,6)

MAMIN=IF2(IT,6)

MAMAX=IF2(IT,9)

NTYP=IF2(IT,9)

MAMAX=IF2(IT,9)

NTYP=IF2(IT,9)

NTYP=IF2(IT,9)

NAMA=IF2(IT,9)

NAMA=IF2(IT,9)

NAMA=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

NAM=IF3(IT,1)

MAMIN=IF3(IT,1)

BEMAX=IF3(IT,1)

ALMIN=IF3(IT,1)

MAMIN=IF3(IT,1)

MAMIN=IF3(IT,1)

MAMIN=IF3(IT,1)

MAMIN=IF3(IT,1)

MAMIN=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)

MAMAX=IF3(IT,1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CALL READMS(1, WORKA, MCF, IT)
RETURN
END
0PT = 1
74/74
 SUBROUTINE READRE
                                                                                                                                                                                                                                                                            9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ဓ္တ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            45
```

PAGE

SUBROUTINE WRINFO(KIST)

```
WRINFO PERFORMS VARIOUS OPERATIONS ON THE INFO ARRAY
IT MAY BE USED TO WRITE IT ON DISK. READ THE INFO ARRAY FROM
DISK INTO MEMORY, OR CHECK THE CONTENTS OF A CERTAIN
TABLE NUMBER
DIMENSION INFO2(30,10), INFO3(20,13)
EQUIVALENCE (INFO2(1,1), INFO3(1,1))
COMMON/SHARE/FMT(8), NOFTAB, ITYPE, MODE, IC, ISEONO, MTEST, IBLNK
COMMON/RFINFO/INFO2(30,10)
                                                                                                                                                  COMMON/RANGE/IDENT, NAL, NBE, NMA, DELALP, DELBET, DELMAC, ALMIN, BEMIN, MAMIN, ALMAX, BEMAX, MAMAX, NTVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROCEDURE FOR CHANGING INFO ARRAY ON AN EXTENSION RUN AND FOR DETERMINING THE NUMBER OF TABLES ON A LIST RUN
                                                                                                                                                                                                                                                                                                                                          AFTER ALL TABLES HAVE BEEN READ, WRITE THE INFO ARRAY TO THE PROPER RANDOM FILE GO TO (31,32), ITYPE NUMB=300 CALL WRITMS(1,INFO2(1,1),NUMB,52)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAME PROCEDURE AS ABUVE IS FOLLOWED FOR 3-WAY TABLES CALL READMS(1,1NFO3(1,1),260.51)
DO 27 IK=1,20
IF(INFO3(IK,1).EQ.IBLNK)GO TO 28
                                                                                                                                                                                                                                                 REAL NAL, NBE, NMA, MAMIN, MAMAX, IDENT
KIST DETERMINES THE PROCEDURE TO BE USED TO READ
OR WRITE THE INFO ARRAY
GO TO (30, 22, 33), KTST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TEST TO SEE WHETHER THE TABLES CAN BE EXTENDED BY NOFTABS WITHOUT EXCEEDING THE LIMIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GO 10 (23,24) ITYPE
READ THE INFO ARRAY FROM THE RANDOM FILE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CALL READMS(1, INFO2(1,1),300,52)
FIND THE LAST TABLE NUMBER BY COMPARING
THE IDENT FIELD TO IBLNK(*000000000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMB=260
CALL WRITMS(1, INFO3(1,1).NUMB,51)
                                                                                                                                                                                         COMMON/NTABS/12NO,13NO,1TABNO
COMMON/ERCOM/NCOEF,1ERTEST,1J,1K
REAL INFO2,1NFO3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IF(INFD2(IJ, 1) EQ IBLNK)GD TO 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IFILNTH2.GT.30)CALL ERMSG(6)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IF ( IERTEST, EQ. 1) RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IF (MODE.NE.2)G0 TO 50 CALL ERMSG(5)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1F (MODE.NE.2)G0 TO 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1F (MODE NE 2)GO TO 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LN1H2 = 1 J+NOF TAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DO 25 1J-1,30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALL FRMSG(7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONTINUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RETURN
                                                                                                                                                                                                                                                                                                                                                                                                                                          RETURN
                                                                                                                                                                                                                                                                                                                          KTST = 1
                                                                                                                                                                                                                                                                                                                            C 23 C 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                             32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27
      0000
                                                                                                                                                                                                                                                                       ပ ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ပပပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ပပ
                                                                                                                                                         0
                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                            25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55
```

```
16 09 54
83/09/08
                                                                                                                                                                                                                                                                                 C PROCEDURE FOR CHANGING INFO ARRAY ON A REPLACE RUN
C READ INFO ARRAY FROM RANDOM FILE AND TEST TO BE SURE !HAI
C THE GIVEN SEQUENCE NUMBER IS A VAIID TABLE
33 IF (MIEST EQ. 1)GO 10 (43.44).ITYPE
GO TO (41.42),ITYPE
41 CALL READMS(1.INFO2(1.1).300,52)
43 ITABND=1SEOND-20
IF (INFO2(ITABNO,1) EQ. IBINK)CALL ERMSG(3)
MIEST*1
RETURN
FIN 4 6+428
                                                                                                                          RETURN
PROCEDURE FOR DETERMINING THE NUMBER OF TABLES
WHEN RUNNING UNDER LIST OPTION
SET 12ND AS THE NUMBER OF 2-WAY TABLES ON RANDOM FILES
12ND-1J-1
RETURN
                                                                                                                                                                                                                            IF (IK EQ 20)IK=IK+1
SET 13NO AS THE NUMBER OF 3 WAY TABLES ON RANDOM FILES
I3NO=IK 1
                                                                                                                                                                                                                                                                                                                                                                                                                                             CALL READMS(1, INFO3(1,1), 260,51)
ITABNO*ISEONO
IF(INFO3(ITABNO,1), EQ. IBLNK)CALL ERMSG(3)
RETURN
                                                                                               IF (LNTH3. GT. 20) CALL FRMSG(8)
                                       LF(LERFEST.EQ.1)RETURN
IC*IK
IF(MODE.NE.2)GO TO 51
0PT-1
                                                                                    LNIH3 = IK+NOF IAB
74/74
                                                                                                                                                                                                                                                                        RETURN
 SUBROUTINE WRINFO
                                                                                                                                          0 0 0 0
                                                                                                                                                                                                                                                                                       ပပပ္ပ
                                                        58
                                                                                                                                                                                                                              5 C
                                                                                                                                                                                                                                                                                                                                                                       4 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                4 4 4
                                                                       9
                                                                                                                                            65
                                                                                                                                                                                                                70
                                                                                                                                                                                                                                                                                     75
                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
```